ATTACHMENT STYLES, RESOURCE CONTROL STRATEGIES AND ACHIEVEMENT MOTIVES PREDICT ADJUSTMENT TO COLLEGE: A QUANTITATIVE STUDY

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ABSTRACT

Emerging adulthood is a critical developmental time as individuals strive to form an identity and establish important social ties. The balance among motives to achieve, gain social power, and connect with others shapes the course of early adulthood as these motives determine how individuals spend their time and energy. This study investigated whether attachment styles, resource control strategies and achievement motivation predict adjustment to college. One hundred and thirteen domestic undergraduate students from a small private university in an urban setting in the Northeast were recruited in different level courses to fill out a series of previously validated self-report measures assessing their social dominance (resource control strategies), attachment style, achievement motive (explicit and implicit) and adjustment to college. A multiple regression analysis was performed to determine how these constructs predicted adjustment to college. The results of this study showed that adjustment to college was significantly negatively predicted by attachment anxiety and coercive resource control strategies. This study informs strategies that can be used by faculty and staff to enhance students' personal growth and increase their success.

Keywords: Adjustment to college, attachment styles, resource control strategy, achievement motive

To my parents Gabriele and Uwe Christian Drath

and my aunt Claudia Kochanek

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CHAPTER 1: INTRODUCTION

According to Erikson (1950) young adults face the major life challenges of identity development and negotiation of intimate relationships. In college, students work to establish their occupational and personal identity. Freshman year is a time of social transition for students as they leave home and increasingly rely on their own peer support networks (Erikson, 1950). The challenges described by Erikson (1950) can precipitate crises—personal and emotional problems that may manifest in global psychological distress, somatic distress, low self-esteem, anxiety and depression (Henton, Lamke, Murphy, & Haynes, 1980). Such crises can interfere with success in college, therefore, it is important for institutions of higher learning to support students in a manner that minimizes developmental crisis.

The hypotheses that guided this study were:

1. Students strongly motivated to achieve academic goals have a better adjustment to college than those who lack such motivation.
2. Academic adjustment is further facilitated by social adjustment; and social adjustment is facilitated by secure attachment and non-deployment of coercive resource control.
3. Although students enter college with predispositions toward achievement, attachment, and resource control, colleges and universities can integrate

programs into first year seminar, and establish residential life programs that promote personal growth; those programs can shape the motivational factors that enhance adjustment. Further, faculty and staff might benefit from training that addresses students' developmental challenges.

The literature suggests that there is a strong relationship between adjustment to college, achievement motivation (Busato, Prins, Elshout, & Hamaker, 2000; Trapmann, 2008) and attachment styles (Lapsley, Rice, & FitzGerald, 1990). However, no research has looked at achievement motivation as a key factor for adjustment to college given students' attachment style and motivation for social dominance. Therefore, this study examined the strength of the relationships among attachment styles, social dominance strategies, achievement motivation and adjustment to college, in order to identify factors that predict student success.

In this study, 113 domestic undergraduate students were recruited from various academic courses (First Year Seminar, Human Services, Psychology, Business, Capstone, International Relations, etc.) to have a good representation of the student body. The construct of attachment style (Feeney, Noller, & Hanrahan, 1994), social dominance (resource control) (Hawley, Shorey, & Alderman, 2009), achievement motivation (McClelland, Atkinson, Clark, & Lowell, 1953), and adjustment to college (Baker & Siryk, 1984) were assessed through well-validated self-report measures.

In this research, the self-report measure selection was guided by an extensive literature review on the proposed constructs. The quantitative measures used in this study were Student Adaptation to College Questionnaire (adjustment to college), Attachment Styles Questionnaire (attachment styles), Resource-Control Strategy Inventory Revised

(social dominance/resource control), and Picture Story Exercise Questionnaire (explicit achievement motivation). In addition, a projective test (qualitative measure), the Picture Story Exercise, was used to assess the participant's implicit achievement motive. Prior research has shown that there is a relationship between some of the proposed constructs in this study. However, this is the first study to examine the combined influence of attachment styles, resource control strategies, and achievement motives on adjustment to college.

A multiple regression analysis was performed to assess if students' social motive profile (attachment style, resource control strategies, implicit and explicit achievement motives) predicts their adjustment to college. The results of this study were used to identify developmental issues in university students and to suggest ways in which assessment can determine students' needs as well as enhance current programs and provide strategies to staff and faculty to help students succeed.

Problem

Early adulthood is the time in life where individuals struggle with identity and intimacy and the balance between these (Erikson, 1950). An individual's identity is linked to questions of personal goals, abilities and desire for success (Brunstein, 2000). "College students who have achieved a strong identity perform better in college. They are more likely to be task-oriented and their work is more meaningful to them" (Cross & Allen, 1970, p. 288). Students who lack achievement motivation with a sense of personal goals/direction have been shown to have difficulty adjusting to college, as these are central to identity formation (Baker & Siryk, 1984; Harris, 1940). Intimacy necessitates establishing close bonds with others (both friends and romantic partners) and also

renegotiating bonds with the family of origin (Paul & White, 1990). Students who are not able to create and maintain healthy emotional bonds may have poor adjustment to college, as these bonds help students to cope with the stresses of academic life (Rice, FitzGerald, Whaley, & Gibbs, 1995). Social bonds may also be impacted by dominance motivation, also termed resource control strategy style (Hawley et al., 2009). College is a social place where students hope to achieve social, as well as academic, goals. Research on early adolescence has shown that striving for dominance, as well as aggressive and manipulative (termed coercive) behavior, is prevalent and important to social and academic adjustment (Hawley, Little, & Card, 2007; Kiefer, Matthews, Montesino, Arango, & Preece, 2012; Kiefer & Ryan, 2008). Dominance goals are associated with lower levels of engagement for achievement and have a negative impact on academic and social adjustment in adolescents (Kiefer et al., 2012; Kiefer & Ryan, 2008). Consequently, achievement motivation, attachment styles, and social dominance (resource control strategies) likely interact to predict adjustment to college.

Adjustment to college is more than academic competency, it is a multidimensional construct emphasizing the variety of demands placed on students (Baker & Siryk, 1984). This study identified factors related to social motives that affect students' adjustment to college. Once the constructs that affect students' adjustment to college were identified, recommendations were considered as to what services should be offered to students and how to involve staff and faculty in the process of enhancing student personal development.

Purpose

The purpose of this study was to identify motivation-related factors that influence student adjustment to college. The literature suggests that social and emotional adjustment predict retention as well as or better than academic adjustment (Gerdes & Mallinckrodt, 1994), which geared this research to examine whether student's attachment styles, social dominance (resource control strategies), and achievement motivation predict adjustment to college.

Individuals differ with respect to their attachment styles and resource control strategy profile; however, achievement motivation alone may predict adjustment to college in a subset of individuals who avoid social goals (both attachment and resource control), but are high in need to achieve. Hence, this research examined how attachment styles and resource control interact with achievement motivation to predict adjustment to college. The data were analyzed by performing descriptive statistics and a multiple regression analysis to determine the multiple factors that affect adjustment to college. Ultimately, the study added to the existing literature of factors that affect adjustment to college, and built a foundation for improving existing student support services.

Terminology of Constructs and Related Measures

Attachment styles. Attachment theory conceptualizes the tendency of individuals to form strong affectional bonds to others (Bartholomew & Horowitz, 1991). Four attachment style categories are defined in the literature: secure, anxious, avoidant and disorganized. However, these are difficult to measure in adults (Bartholomew & Horowitz, 1991). The Attachment Style Questionnaire (ASQ), measuring attachment styles in adults, identifies five aspects of these attachment style categories: discomfort

with closeness, relationships as secondary (a means to achieve other goals), need for approval, preoccupation with relationships, and confidence (in self and others) (Feeney et al., 1994)

Social dominance/resource control strategies. Hawley developed a theory of human social dominance she termed Resource Control Theory "…an evolutionary-based theory of social dominance addressing behavior, personality, and socio-emotional development" (Hawley et al., 2009, p. 1098). Hawley measures social dominance strategies and motivation with the Resource-Control Strategy Inventory Revised (RCSI-R) (Hawley et al., 2009). Individuals are parsed by the RCSI-R by placement into five categories: prosocial controllers, coercive controllers, bistrategic controllers, noncontrollers, and typical controllers (Hawley et al., 2009).

Achievement motivation. Achievement motivation is defined as "the striving tendency towards success with the associated positive effects" (Busato et al., 2000, p. 1058). McClelland (1988) conceptualized achievement motivation as the need to achieve and demonstrated that individuals with high nAchievement perform better than those with low nAchievement in environments where effort is rewarded. Implicit motives are assessed through projective means such as the Thematic Apperception Test (TAT) or Picture Story Exercise (PSE), explicit motives are assessed using the Picture Story Exercise (PSE-Q), "…implicit motives predict spontaneous behavioral trends over time, whereas self-attributed motives predict immediate specific responses to specific situations or choice behavior" (McClelland, Koestner, & Weinberger, 1989, p. 691).

Adjustment to college. Adjustment to college is multidimensional and, according to the Student Adjustment to College Questionnaire (SACQ), consists of: social adjustment, academic adjustment, emotional/personal adjustment, and goal commitment/institutional attachment (mostly referred to as attachment) (Baker & Siryk, 1984).

Role of Theory

This study used a postpositivist framework to investigate how social motives predict adjustment to college. A postpositivist is guided by a deterministic philosophy by which causes to a problem need to be identified (Creswell, 2009). "The postpositivist approach to research is based on seeking appropriate and adequate warrants for conclusions, on hewing to standards of truth and falsity, that subject hypotheses (of whatever type) to test and thus potential disconfirmation, and on being open-minded about criticism" (Phillips & Burbules, 2000, p. 86). The literature has identified that students struggle with their identity and intimacy goals while adjusting to college; this literature guided the research to examine theories of attachment styles, resource control strategies, achievement motives, and how these predict adjustment to college (Kiefer & Ryan, 2008). The theoretical inquiry was the basis for identifying the constructs of the variables being measured in this study (Creswell, 2009).

During early adulthood individuals are faced with the task of finding out who they are while struggling to form intimate bonds with others (Erikson, 1950). This is also the time when they are leaving home and transitioning to college. Loss of supports and life challenges can leave students overwhelmed (Gerdes & Mallinckrodt, 1994). The literature suggests that attachment styles, resource control strategies and achievement

motivation play an important role in a student's adjustment to college. This study investigates how these factors are linked to a student's adjustment to college. Students who do not have a secure base or who struggle for social dominance are chronically preoccupied with social relationships that might decrease their need for achievement and the mastery of goals (Hawley et al., 2009).

Theory of Adjustment to College

The transition to college is a complex challenge (Gerdes & Mallinckrodt, 1994). According to Baker & Siryk (1984), the transition to college is mediated by social adjustment, academic adjustment, personal/emotional adjustment, and goal commitment/institutional attachment. For many adolescents the transition to college is the first time away from familiar surroundings and parental sources of support (Rice et al., 1995). In fact the college situation has been compared to the "strange situation" developed by Ainsworth (1979) where infants and toddlers are observed away from caregivers while they are responding to novel and challenging experiences (Rice et al., 1995). Just like the "strange situation," experiencing college life for the first time can be considered a challenge to the adaptive strategies and coping mechanisms of the late adolescent (Rice et al., 1995).

Studies show that the degree of intellectual and social integration significantly affects a student's decision to withdraw from institutions of higher education (Tinto, 1982). Some students find a way to adapt while others are overwhelmed and feel isolated (Gerdes & Mallinckrodt, 1994). Earlier studies on college adjustment focused primarily on academic ability when looking at predictors for retention and found that no more than half of the variance could be explained by it (Gerdes & Mallinckrodt, 1994). The

literature shows that the second dimension, social adjustment of students, may be as important as academic factors in predicting persistence in college (Gerdes & Mallinckrodt, 1994). Therefore, academic institutions should make a commitment to fostering strategies that assist students with integration into the social environment (Gerdes & Mallinckrodt, 1994).

Three important factors in students' social adjustment is being able to integrate oneself into the college social life, to manage new social freedoms and to establish a support network (Gerdes & Mallinckrodt, 1994). Students who are integrated into the social structure of the university are more likely to take part in campus activities, meet new people, make friends, and are less likely to feel lonely and miss their family (Credé & Niehorster, 2012). Interactions with other students and with faculty outside of the classroom have shown to affect the student's intellectual and social integration (Tinto, 1982). The more students spent time with professors and their peers, the higher is the probability that students will complete their education (Tinto, 1982).

Academic adjustment is the process of psychological and behavioral changes as individuals manage their new academic environment (Lijuan Quan, Rui Zhen, Benxian Yao, & Xiao Zhou, 2014). Baker and Siryk (1984), argued that academic adjustment is reflected in the degree to which students have adapted to academic demands, their attitudes towards their course of study, as well as how immersed they are in the material and in their academic efforts. Difficulty in academic adjustment is related to social maladjustment and unhealthy development that includes, but is not limited to, poor social functioning and low self-esteem (Lijuan Quan et al., 2014). The direction of causality in the relationship between social and academic functioning has not been established.

Personal/emotional adjustment (which reflects mental health) is measured by the way students react emotionally to the demands of the college environment (Credé & Niehorster, 2012). Gerdes and Mallinckrodt (1994) found that personal-emotional adjustment could be manifested in global psychological distress, somatic distress, anxiety, low self-esteem, or depression.

Finally, institutional/goal commitment is defined by the degree to which students identify with the institution and have become emotionally attached to the university community (Credé & Niehorster, 2012). The institutional commitment is a reflection of how satisfied the students are with their teachers' ability, knowledge, and personal qualities, as well as their own ability to manage the academic work (Munro, 1981). Furthermore, the commitment of the students to the goal of completing their degree was the strongest predictor of persistence (Munro, 1981).

Theory of Motivation

Why is it important to find out about people's motives? Identifying students' motives can help us to understand which incentives produce positive emotions that in turn motivate them to strive for goals as supposed to which ones cause fear and avoidance; in simplistic terms, some motivators can increase performance in students whereas others might cause students to underperform. A motive is a disposition to strive for a certain kind of satisfaction and the capacity to be satisfied by a certain class of incentives (Atkinson, 1957). Extensive research on the topic of implicit (nonconscious) motives has shown that they affect long-term behavioral trends whereas explicit or conscious motives predict immediate and situational behavior (McClelland et al., 1989). McClelland and Atkinson performed many studies to show the importance of the

achievement motive for the prediction of career and academic performance (Atkinson & Litwin, 1960; McClelland, 1978).

Motivation can be seen "…as instincts that direct our behavior, as drives that motivate us to find ways to feel better, as the desire to maintain an optimal level of arousal in our body, or as incentives that guide us to seek reward from the world" (Rozhkova, 2011, p. 17). Theorists, who believed that conditioning is the key to motivate certain behaviors, were looking at external factors that drive behavior (Bandura, 1986; Brewer, 1974; Pavlov, 1932; Skinner, 1985). They found that behavior is dependent on its reinforcement whereas cognitive consistency theorists believed that humans are motivated by bringing their body to a state of equilibrium or cognitive consonance (Festinger, 1957; Heider, 1946). The humanistic theories of Maslow (1943), Rogers (1963), and Weiner (1992) added to existing believes by highlighted that individuals are motivated by maximizing their capabilities and their self-actualizing tendencies.

The influential theories of achievement motivation can be categorized in the following way: Content theories, cognitive theories, and volitional theories (Rozhkova, 2011). Content theory of needs is based on Maslow (1943), McClelland (1965) and Murray's (1938) work. The content theory of needs focuses on the source of particular goals, which are based on needs, motives, and values of the person (Rozhkova, 2011). Murray (1938) was influential in the research on achievement motivation. The need for achievement was one of Murray's 20 basic human needs (Murray, 1938). He believed that needs had two factors: the object that would fulfill the need and the energy that would drive the behavior and influence the strength of the desire (Murray, 1938). Further, Murray (1938) developed the Thematic Apperception Test (TAT), which has

been the basis for many achievement motive studies. The present study was based on the content theory of needs which is based on Murray's (1938) and McClelland's, (1965) work. The TAT, developed by Murray (1938), was changed to the Picture Story Exercise (PSE) by McClelland (1965), and was used in this study.

McClelland's theory of needs identifies three human needs: achievement, power, and affiliation (McClelland, Maddocks, & McAdams, 1985). He believed that everyone has the need for achievement, power, and affiliation to different degrees (McClelland et al., 1985). While Atkinson continued to use the TAT, his students moved away from it, believing that motivation was derived from cognitive variables (McClelland, 1985). McClelland (1985) believed that this move was premature as there was evidence that specific physiological drives are not only associated with biological drives like hunger but also with social motives (need for power and affiliation) that could be measured using the TAT.

Individuals with high affiliative motivation are more likely to initiate affiliative interactions (Koestner & McClelland, 1992). "… the importance attached to maintaining or regaining emotional connections to people similar to the self" (Veroff, Depner, Kulka, & Douvan, 1980, p. 1250). Multiple studies of affiliative motivation have shown that individuals with high affiliative motive spend more time interacting with others (i.e. writing letters, making phone calls, visiting friends) (Lansing & Heyns, 1959; McAdams & Constantian, 1983). Further, individuals with high affiliation motive were more likely to report that they wished to be with someone when alone (McAdams & Constantian, 1983). Affiliation was also related to better grades in college students, when the professors were warm and friendly (McKeachie, 1962). However, even though

individuals with high affiliative motive spend more time with others than individuals who were low in affiliative motive they were not more popular (Koestner & McClelland, 1992). In fact, they were relatively more unpopular (Koestner & McClelland, 1992). Therefore, it appears that affiliative motive may be associated with social anxiety and fear of rejection, which could be the result of failure to establish a meaningful relationship with others (Koestner & McClelland, 1992). Alternatively, popularity may correlate more with aspects of the power motive than with the affiliation motive (Hawley, Little, & Card, 2007).

The power motive rose out of the out of the need to find a companion for the affiliative motive. A picture cue depicting two men of equal status, was assumed to elicit a high level of affiliative motive but did not and the focus turned to the issue of power (Veroff, 1992b). Adler's (2002) theoretical views on the establishment of power motivation in early childhood were the initial basis for scientific understanding of power motivation (as cited in McAdams, 1988). Adler believed that the inherent aggressive drive could be compared to Freud's libido and sexual drive (as cited in McAdams, 1988). Initially, the research focused on the concerns about controlling the means of influence rather than wanting to seek power or assertiveness over others (Veroff, 1992a). To find out what would differentiate one group from another, one study used an experimental group (college students running for student government office) and a control group (college students in an ordinary classroom) (Veroff, 1992b). This referenced study supported the notion that power motive assessment emphasized the fear of weakness "…concern about maintaining status vis-à-vis another person and avoiding the influence

or control of others. The motive for power as fear of weakness includes an inclination to avoid public recognition as someone low in status" (Veroff et al., 1980, p. 1250).

The power motive score in relationship to achievement and affiliation motive scores were examined in a group of participants, as noted in Table 1. The 1976 national survey showed that the need for affiliation and the need for power were negatively correlated, which supported the original theory that power is an alternative to affiliation (Veroff, 1992b). Also, McClelland pointed out that high power and high affiliation is a profile seen infrequently and is often followed by a decrease in affiliation because of motive conflicts (McClelland, 1992). It is believed that the measure of power motivation in combination with affiliative motive can give great insight into interpersonal behavior (Veroff, 1992b).

Table 1

Intercorrelations of the Need for Achievement, Affiliation and Power

	Motive Measures			
	Power (FOW)α	Affiliation	Achievement	Power (HOP)b
Power (fear of weakness –FOW)		-.13**	.05	.42***
Affiliation	-.14**		-.09*	.01
Achievement	-.01	.10*		.03
Power (hope of power –HOP)	.32****	-.04	.08*	

Note. Pearson rs from Veroff, Depner Kulka, and Douvan (1980). Men (N = 508) above the Diagonal; Women (N = 700) below. Motive scores are corrected for correlations with story length. α Veroff power measure (see chapter 20); b Winter power measure (see chapter 22) *p < .05, ** p <.01, **** p < .0001. Adapted from "Power of Motivation" in C. P. Smith, *Motivation and Personality: Handbook of Thematic Content Analysis* (pp. 278–285) by Veroff, J., 1992b. Cambridge University Press.

McClelland et al. (1985) examined the different theoretical viewpoints and developed his own theory of achievement motivation and how it should be measured. He

stated: “What I wanted to do was prove that Murray was right—that motives are key and often unconscious determinants of behavior, they are independent of traits, and they are uniquely measurable with the TAT” (McClelland, 1999, p. 164). However, he found that there was a difference between implicit and self-attributed motives (McClelland et al., 1989). He discovered that the variables that were coded using imaginative thoughts from stories written to picture cues (like in the TAT and Picture Story Exercise) differ from motives that are measured as self-reported desires (McClelland et al., 1989).

McClelland et al. (1989) therefore emphasized that the measure assessing the need for achievement (*n* achievement) should be distinguished from the measure assessing at the value of achievement (*v* achievement). Many researchers fought that concept and tried to find ways to explain the lack of correlation between implicit and self-attributed motives (McClelland et al., 1989). However, McClelland et al. (1989) believed that it was important to acknowledge their differences and find out how they differ and how they relate to each other. Subsequently, they found “…that implicit motives predict spontaneous behavioral trends over time, whereas self-attributed motives (explicit motives) predict immediate specific responses to specific situations or choice behavior” (McClelland et al., 1989, p. 691).

Knowing the strength of both implicit and explicit motives could improve predictions of performance (McClelland et al., 1989). Raynor and Entin (1982) found that college students who were high in the *n* achievement (implicit) did better in courses than those low in *n* achievement (implicit) when it was important to achieve long-term goals (as cited in McClelland, 1988). In other words, the conscious achievement goal to do well directs the impulse of *n* achievement motivation (implicit). This shows that *n*

achievement (implicit) by itself is a poor predictor of success (McClelland et al., 1989). The self-attributed motives, plans, and goals are needed to show the direction of the *n* achievement (implicit) (McClelland et al., 1989). Further, motives and incentives can conflict and undercut as well as combine and facilitate a certain behavior (McClelland et al., 1989). Studies have shown that explicit incentives can undercut intrinsic interest while performing a moderately challenging task (Deci & Ryan, 1987). Further, a conflict between *n* achievement (implicit) and a self-attributed motive can lead to compromise between the two (McClelland et al., 1985). A person that might be high in *n* affiliation (implicit) and at the same time an explicit desire to be alone might express his or her n affiliation (implicit) behavior by writing a letter instead of talking in person (McClelland et al., 1985).

Theory of Attachment Styles

Affiliative motive, first introduced by Murray (1938), is described as the desire to be in company with others, whereas attachment is directed towards particular individuals (Cassidy, 2002). The characteristic behavioral patterns of each attachment style were observed and quantified in a laboratory procedure called the "strange situation" (Ainsworth, Blehar, Waters, & Wall, 1978). In this procedure, toddlers were separated from their caregivers and observed for play and protest behaviors in the presence of an unfamiliar adult (Ainsworth et al., 1978). Successful transition to college is facilitated when students feels secure while being separated from their attachment figures (Kenny & Rice, 1995; Lapsley & Edgerton, 2002; Lapsley et.al., 1990; Mattanah, Lopez, & Govern, 2011; Vivona, 2000). A secure attachment is the basis for a healthy process of separation and individuation from family members (Mattanah et al., 2011). Establishing intimate

and sustaining relationships with others is influenced by the expectation one has about the interpersonal world, which is shaped by one's attachment style (Vivona, 2000). Students who are able to create and maintain secure and non-abusive emotional bonds have an easier time adjusting to college (Rice et al., 1995).

Attachment theory conceptualizes the tendency of individuals to form strong affectional bonds to others (Bartholomew & Horowitz, 1991). According to Bowlby, the experiences children have with their early attachment figures form a prototype for later relationships with others outside the family (as cited in Bartholomew & Horowitz, 1991). Collins and Reid (1994) explain it as follows,

> …. as a person accumulates thousands of experiences with multiple attachment figures (such as mother and father, grandmother and grandfather, nursery school teachers, close friends, and romantic partners) the person-specific rules and representations are likely to form abstract schemas and scripts, thereby becoming quite general. Even after this happens, however, a person's memory presumably continues to contain the kinds of specific representations and expectations that Saribay and Andersen study in their research on transference. (as cited in Mikulincer & Shaver, 2007, p. 199)

Saribay and Anderson (2007) argue that these specific representations and expectations are transferred unto a new person who reminds them of a former attachment figure.

Ainsworth (1979) believed that goal of attachment was not proximity seeking alone but that it was impacted by how the separation from the primary caregiver was evaluated by the child. That prompted her to create an assessment tool the "Strange Situation" which she used in her observational studies (Cassidy, 2002). She identified

three distinct patterns of infant attachment: Secure, anxious-resistant, and avoidant (Ainsworth, 1979). Secure attachments help individuals to explore the interpersonal and material worlds freely (Elliot & Reis, 2003). The working model of the secure relationship to the child's primary caregiver enables him or her to tolerate separation from the mother figure with less distress for longer periods of time (Ainsworth, 1989). With increased locomotion children are able leave their secure base to explore and to connect with others (Ainsworth, 1989).

According to Ainsworth (1989), a child with a secure attachment style easily separates from the caregiver if it is voluntary and their stress is low, whereas when the stress is high the child actively seeks out the attachment figure for comfort (Ainsworth, 1989). For the securely attached adolescent, leaving home for college is likely to be perceived as an opportunity for environmental exploration and mastery (Kenny, 1987). Knowing that their parents will continue to provide a secure base, will encourage a college student to explore and to become more independent (Kenny, 1987).

> The secure person is not a bulletproof superhuman; he or she does not deny life's precariousness or human finitude and limitations. Such a person can deal more effectively with difficulties and frustrations because attachment figures have helped identify, articulate, and deal with these tribulations. In addition, such a person has a continuing sense that other people are available to provide help, support, and encouragement when actual, correctly perceived conditions are threatening or painful. (Mikulincer & Shaver, 2007, p. 198)

Positive internal working models of attachment figures, as illustrated in Table 2, are the foundation of a secure base from which students can explore and build new

relationships. Bowlby's attachment theory arose from his interaction with ethologists studying animal behavior (as cited in Leedom, 2014); as such attachment behavior is considered to be an inborn characteristic of humans. The attachment behavioral system can be best understood in relationship to the exploratory system, the fear system, and the sociable system (Cassidy, 2002; Leedom, 2014). That children develop bonds to both responsive and abusive caregivers highlights how attachment styles can be influenced by external factors (Cassidy, 2002). Security derived from healthy attachment enhances the exploratory system, as children who are less fearful are able to more fully engage with the environment (Cassidy, 2002). The belief that an attachment figure is available if needed enhances the exploration, whereas not knowing if they are available might reduce exploration (Cassidy, 2002). The fear system is thus interrelated with the attachment system (Leedom, 2014). Without fear, survival and reproduction would be reduced, however excessive fear and reduced exploration may also negatively impact survival (Leedom, 2014). Children who explore the environment are in the best position to develop achievement motivation as they encounter rewards.

Table 2

Attachment Group Differences in Working Models

Secure	Avoidant	Ambivalent
Memories		
Parents warm and affectionate	Mothers cold and rejecting	Fathers unfair
Attachment-related beliefs, attitudes		
Few self-doubts; high in self-worth	Suspicious of human motives	Others complex and difficult to understand
Generally liked by others	Others not trustworthy and dependable	People have little control over own lives
Others generally well-intentioned and good-hearted	Doubt honesty and integrity of parents and others	
Others are generally trustworthy, dependable, altruistic	Lack confidence in social situations	
Interpersonally oriented	Not interpersonally oriented	
Attachment-related goals and needs		
Desire intimate relationships	Need to maintain distance	Desires extreme intimacy
Seek balance of closeness and autonomy in relationships	Limit intimacy to satisfy needs for autonomy	Seek Lower levels of autonomy
	Place greater weight on goals such as achievement	Fear rejection
Plans and strategies		
Acknowledges distress	Manage distress by cutting off anger	Heightened displays of stress and anger
Modulate negative affect in constructive way	Minimize distress-related emotional displays; withhold intimate disclosure	Solicitous and compliant to gain acceptance

Note. Attachment Group Differences in Working Models Adapted from "Adult Romantic Attachment and Couple Relationships." In J. Cassidy & P. R. Shaver, *Handbook of Attachment: Theory, Research, and Clinical Applications* (pp. 355–377) by Feeney, J. A., 2002, New York, NY: Rough Guides.

Ainsworth believed that the way we perceive separation from attachment figures determines the way we react to separation (as cited in Cassidy, 2002). Internal working

models influence individuals' cognitive, emotional, and behavioral responses (Feeney, 2002). Cognition is influenced by the way memories are encoded and retrieved as well as how we explain events (Feeney, 2002). Emotional responses affect both the initial response to a situation ("primary appraisal") and the cognitive processes afterwards that either maintain, increase or lessen previous behaviors ("secondary appraisal") (Feeney, 2002). The behavioral responses are the activated behaviors that have been previously stored (Feeney, 2002). However, if no strategies exist for a current situation new ones are created (Feeney, 2002). Understanding how early working models affect the way we connect with others and adapt to new environments are crucial to understanding what effects adjustment to college. In addition to attachment styles, resource control strategies are formed in early childhood and affect the way we interact with our social environment.

Theory of Social Dominance and Resource-Control Strategies

Resource control theory and attachment theory is derived from ethology and is based on the assumption that all social mammals compete for resources needed for physical growth and development and reproduction (Leedom, 2014). Resource control theory, similarly to attachment theory, is an evolutionary-based theory that explains behavior, personality and socio-emotional development (Hawley et al., 2009). Hawley (2007) categorizes resources as material (growth, survival, and cognitive behavioral development), social (alliance partners), and informational (acquisition of both social and material resources). Resource control strategies divide individuals into five categories: prosocial controllers, coercive controllers, bistrategic controllers, noncontrollers, and typical controllers (Hawley, 2007).

Prosocial controllers gain resources by capitalizing on positive social relationships (i.e. friendships), whereas coercive controller uses negative behaviors (bullying) and bypasses others to gain access (Hawley et al., 2009). The bistrategic controller uses both coercive and prosocial strategies to gain resources, whereas the typical controller is average on both and the non-controller is not resource directed (Hawley et al., 2009). Extensive research has demonstrated that bistrategic controllers are the most socially successful with respect to resource control (Hawley, 2007). The different resource control strategies that stem from biology and early childhood experiences, have been linked to the ability to form social relationships and the way individuals allocate their resources (Hawley, 2008). In children and adolescents it has been shown that strategies employed that are adaptive in one environment may negatively impact adjustment in another environment (Jonkmann, Trautwein, & Lüdtke, 2009).

The way individuals control their resources is formed in early childhood (Deci & Ryan, 2002; Hawley, 1999; Hawley & Little, 1999). Studies with children have shown that prosocial control is related to positive social characteristics and well-being whereas coercive controllers demonstrate high need for recognition and hostility (Hawley, Little, & Pasupathi, 2002). Research on how resource control strategies play out in adults is limited (Hawley, 1999). However, a wide body of literature connects excessive dominance motivation and coercive strategies to adult psychopathology (Johnson, Leedom, & Muhtadie, 2012). One study investigated social dominance in adolescents and found that social dominance, depending on the environment, is associated with both positive (such as achievement, self-concept, and peer acceptance) and negative adjustment (deviant and disruptive behaviors and peer rejection) (Jonkmann et al., 2009).

How resource control strategies are developed can be in part understood by looking at how attachment theory influences early child development. Bowlby (1973) was influenced by Darwin's concept of natural selection, and believed that close emotional ties to the primary caregiver are important for infant survival. Further, interactions and conflicts between the infant and primary caregiver were seen as resource competition (Godfray, 1995). Chisholm (1996) proposes that when infants feel that their safety is threatened they may develop two distinct adaptive insecure attachment styles to ensure that resources are provided by their primary caregiver. Behaviors such as crying, smiling, and immature reactions can be a way for infants to control the attention and resources that are provided by their primary caregiver (Bowlby, 1973; Hawley, 2007). In cases where the primary caregiver is unable to consistently care for their infant, the child may use behaviors related to ambivalent attachment style to maximize their parents' attention (Chen & Chang, 2012). If parents do not adequately care for their infant, the child may develop an avoidant attachment by becoming self-sufficient in order to survive (Chen & Chang, 2012). Chen and Chang (2012) concluded, "If the attachment behavioral system serves to regulate competitive behaviors to control resources during infancy, then it should continue to serve this adaptive function" (p. 390).

Hawley et al. (2009) links resource control to attachment styles because she believes that the working models of attachment figures established in early childhood influence the strategies used to pursue material resources. The four attachment factors that correlate with resource control strategies are confidence (secure), relationship as secondary (insecure), avoidance (insecure), and anxiety (insecure) (Hawley et al., 2009). It is assumed that attachment security is optimal for material and social goal pursuit but

discomfort with closeness (aspect of avoidance) is also positively related to effective resource control (Hawley et al., 2009). In her study correlating attachment styles with resource control strategies she found that prosocial controllers, when securely attached, scored low on avoidance (insecure), and were modest on anxiety (insecure) (Hawley et al., 2009). Prosocial behavior, is different from altruism because it is motivated by goal attainment (Hawley, 2014b). It requires individuals to have social skills (like perspective taking), agreeableness, impulse control and self-regulation (Hawley, 2014b). Individuals who use prosocial behaviors are more likely to rise in rank and social dominance where others who do not might be excluded from social life (Hawley, 2014b).

Resource control strategy categories are determined by ranking each individual according to his and her score in comparison to others in the same sample. Prosocial controllers are ranked in the 33rd percentile of prosocial strategies and the lower 66th percentile in coercive strategies, which means that they attain their goals via socially acceptable behavior rather than aggression (Hawley, 2007). They are described as highly skilled, agreeable, and socially appealing (Hawley, 2007). In addition, they are intrinsically motivated to pursue friendships with others that are high on intimacy and low in conflict (Hawley, 2007).

Coercive controllers, on the other hand, score high on anxiety (insecure) and avoidance (insecure) and they score low in confidence (secure) (Hawley et al., 2009). The coercive controllers are ranked in the upper 33rd percentile in coercive strategies and in the lower 66th percentile on prosocial strategies (Hawley, 2007). In comparison to prosocial controllers, they are aggressive, hostile and unskilled socially relative to other

youth. Further, their motivations for friendships are extrinsic (power and popularity) and are defined by high conflict and low intimacy (Hawley, 2007; Hawley et al., 2009).

Bistrategic controllers score average on confidence and display a mix of high anxiety and high avoidance (Hawley et al., 2009). Bistrategic controllers exhibit both prosocial and coercive behavior (Hawley, 2014b). They appear to be the most successful resource controllers by being able to balance aggression with prosociality to achieve the best results (Hawley, 2014b). Bistrategic controllers score in both prosocial strategies and coercive strategies beyond the top 66th percentile (Hawley et al., 2009). They share characteristics with both prosocial and coercive controllers (Hawley, 2007). They rate high on aggression but, at the same time, they are highly socially skilled (Hawley, 2007). In their mind and in the mind of others they are effective resource controllers and are capable of achieving and maintaining a high social status reputation (Hawley, 2007). It is because of their use of prosocial and coercive strategies that bistrategic controllers are considered the most successful at resource control (Hawley, 2007).

Non-controllers have a reasonably healthy attachment profile with low levels of anxiety and discomfort and their confidence levels are at or above the group average (Hawley et al., 2009). However, they score very low on relationship as secondary (Hawley et al., 2009). They view neither the social nor the material world as resources they value (Hawley et al., 2009). Noncontrollers are ranked in the lower 33rd percentile in both prosocial strategies and coercive strategies (Hawley et al., 2009). Noncontrollers score the lowest on resource control and have a very low social dominance motivation (Hawley, 2008). Further, they may feel socially ineffective, lonely, and unable to attain goals (Hawley, 2007; Hawley et al., 2009). The typical controller is the largest group and

constitutes the remainder (Hawley, 2007). They are average on prosocial and coercive strategies (Hawley, 2007; Hawley et al., 2009).

According to Hawley's (2007) discussions of resource control strategies, it appears that bistrategic controllers are the most successful in resource control by being able to balance prosocial and coercive strategies. In Hawley's (2007) research with children and adolescent she found that bistrategic controllers receive more than average nominations for "best friend" and both parties described the quality of their friendship among the highest in comparison to others. However, bistrategic relationships are also marked by high levels of conflict (Hawley, 2007). Despite their high levels of aggression they are able to demonstrate relationship skills such as intimacy and are socially attractive to peers (Hawley, 2014a).

Summary of Theory

The multidimensionality of adjustment to college supports the hypothesis that attachment styles, resource control strategies, and achievement motivation play a role in students' transition and success. Attachment styles and at least in part resource control strategies are based on working models established in early childhood. These models affect the way individuals adjust to new environments. Resource control strategies add another layer as they describe how individuals pursue their social and material goals, "…early relationships presumably teach one to see interpersonal relationships as welcoming, rewarding, and functional, or as inconvenient impediment to goal attainment" (Hawley et al., 2009, p. 1115). While it is not clear how resource control strategy affects adjustment to college, the theoretical discussion assumes that there is a difference in students' adjustment to college depending on an individual's use of

prosocial and/or coercive strategies. In addition, achievement motivation plays a key role in college success and this study seeks to identify to what degree it predicts adjustment to college in addition to attachment styles and resource control strategies.

The purpose of this research was to investigate how and to what degree attachment styles, resource control strategies, and achievement motives predict adjustment to college. The research questions were investigated using a deductive approach by which the theories of the constructs defined the hypothesis that attachment styles, resource control strategies, and achievement motive predict adjustment to college. This hypothesis was tested using self-report measures that emerged through the review of the literature and the theories underlying the constructs. These self-report measures have been previously validated and were used to correlate the variables.

CHAPTER 2: LITERATURE REVIEW

Leaving for college is a major life transition with numerous novel challenges that go beyond the greater academic demands, less structure, and increased autonomy (Credé & Niehorster, 2012). It is a critical developmental period where students are faced with multiple transitions, while having to be more independent and responsible for their personal and academic lives (Pittman & Richmond, 2008). Students have to be able to navigate a new and extended social circle that greatly impacts their adjustment to college (Credé & Niehorster, 2012). There is also a tremendous pressure to engage in the process of career decision making, which can be a great challenge (Credé & Niehorster, 2012). While many students have a successful transition to college, there are others who experience long-term emotional maladjustment and depression (Pittman & Richmond, 2008). Therefore, finding out what contributes to a successful transition to college is important.

Adjustment to College is Multidimensional

Adjustment to college is a time when students are developing their identity and forming intimate relationships (Erikson, 1950). Establishing one's identity and establishing new relationships can be a challenge for students. Making new friends and establishing positive friendships is important in the process of adjusting to college (Shim & Ryan, 2012). Some students seem to thrive in the new college social scene, while others struggle to connect with their peers (Shim & Ryan, 2012). Social and personal

growth is an important benefit of college life and it has been associated with academic adjustment and an overall satisfaction with the college experience (Shim & Ryan, 2012). A secure attachment is the foundation for the process of separation and individuation (Mattanah et al., 2011) and has been shown to increase social and academic adjustment to college (Rice et al., 1995; Vivona, 2000). On the other hand, an insecure attachment was associated with difficulties adjusting to college and a lower level of intimacy development (Vivona, 2000).

Baker and Siryk (1984) identified four factors that impact adjustment to college: social adjustment, academic adjustment, emotional/personal adjustment, and goal commitment/institutional attachment; they incorporated these factors into their instrument, the Student Adaptation to College Questionnaire (SACQ). They argued that adjustment to college was multidimensional and that all four categories needed to be considered when measuring students' adjustment to college (Baker & Siryk, 1984). Baker and Siryk (1984) felt that prior instruments were not able to capture the multi-faceted aspects of adjustment to college. The external outcome criteria that were used to validate their instrument were attrition (primarily goal commitment/institutional attachment and secondary academic adjustment, social adjustment, and personal/emotional adjustment), appeals for psychological services (personal/emotional adjustment), freshman grade point average (academic adjustment), election to an academic honor society (academic adjustment), social activities checklist (social adjustment), application for dormitory positions (social adjustment) (Baker & Siryk, 1984).

While the adjustment to college score is an outcome in its own right, adjustment also impacts students' grades and retention rate. Academic adjustment is a predictor of grade point average but recent research has recognized that adjustment to college is, indeed, multidimensional, as struggling to adjust in one domain can affect the adjustment in other domains (Credé & Niehorster, 2012). When students are struggling with social adjustment, they might isolate themselves and not seek help when needed (Credé & Niehorster, 2012). Further, students' decisions to withdraw are greatly impacted by goal commitment/institutional attachment, their performance and retention and their personal development (Credé & Niehorster, 2012).

In a meta-analysis, goal commitment/institutional attachment was the strongest predictor of student retention followed by social adjustment, academic adjustment and personal/emotional adjustment (Credé & Niehorster, 2012). Further, overall GPA was strongly related to academic adjustment with substantially weaker relationships to institutional attachment, personal/emotional adjustment, and social adjustment (Credé & Niehorster, 2012). Other factors such as age, minority status, gender, socio-economic status, and first-generation college student status was largely unrelated to adjustment to college (Credé & Niehorster, 2012). Predictors often used to determine success in college such as high school grade point average and common admissions test scores were only weakly related to adjustment to college (Credé & Niehorster, 2012).

Achievement Motive and Academic Performance

Achievement motivation produces striving "to accomplish something difficult. To master, manipulate or organize physical objects, human beings, or ideas" (Murray, 1938, p. 164). White (1959) and other theorists believe that individuals have an innate

motivational propensity for curiosity and exploration. That motivation propensity for curiosity is the foundation for Bowlby's development of attachment theory (Bowlby, 1969). A motive is a disposition to strive for a certain kind of satisfaction and the capacity to be satisfied by a certain class of incentives (achievement, affiliation, and power) (Atkinson, 1957). It is the feeling of pride in accomplishments, a sense of belonging and being warmly received by others, and feeling in control and influential (Atkinson, 1957).

Achievement, affiliation, and power are the three distinct needs individuals are motivated by (Atkinson, 1957; McClelland et al., 1985). The need for achievement is defined as the wanting to strive for success (Busato et al., 2000). Power motive is the need to control the means of influence, whereas the need for affiliation desire close interpersonal relationships (McClelland et al., 1985). Achievement motivation is the "…striving tendency towards success with the associated positive effects and towards the avoidance of failure and associated negative effects - and it is also known to be an important predictor for cognitive performance" (Busato et al., 2000, p. 1058). The achievement motive has been the primary focus as it is important for both academics (Busato et al., 2000) and career success (McClelland, 1987). A positive correlation exists between the achievement motive construct and academic performance (Busato et al., 2000; Trapmann, 2008).

Atkinson and Reitman (1956) showed that there is a significant relationship between achievement motive and performance when that performance is instrumental to produce a feeling of pride in the accomplishment. Intellectual ability and achievement motivation were associated positively with academic success (Busato et al., 2000; Conti,

2000). Achievement motivation was positively correlated with all the four variables of academic success (amount of study points earned after first, second, and third academic year, and the grade for the very first examination) (Busato et al., 2000).

The power motive shows itself through instrumental and socially appropriate power use and reckless and impulsive power (Winter, 1988). Students who strive for power in a socially appropriate way, may seek office in the student government while reckless and impulsive display of power can result in drinking, drug use, physical and verbal aggression, and precocious and exploitive sexuality (Winter, 1988). However, these behaviors are more frequently associated with men who have a strong power motive (Winter, 1988). Individuals with less power motive display greater affiliative motive by joining a campus service that promotes new friendships among students and by seeking closer proximity to a partner when placed in a position of low power (Case, Conlon, & Maner, 2015).

Attachment Styles and Transition to College

As previously mentioned, transitioning to college has been compared with the "strange situation" (Rice et al., 1995). Students that have a secure base are more likely to successfully make the transition to college (Kenny & Rice, 1995; Lapsley & Edgerton, 2002; Lapsley et al., 1990; Mattanah et al., 2011; Vivona, 2000). Securely attached students had less difficulty in managing the new developmental and adjustment challenges of the college environment, whereas insecurely attached students are experiencing difficulties in managing personal, interpersonal, and academic affairs (Rice et al., 1995). A secure attachment lays the foundation for a healthy process of separation and individuation from family members (Mattanah et al., 2011). Establishing intimate

and sustaining extra familial relationships is influenced by the expectation one has about the interpersonal world and by one's attachment style (Mattanah et al., 2011).

Students with secure attachment have shown greater ability to meet the academic demands of school than individuals with insecure attachment (Moss & St-Laurent, 2001). Secure students have higher scores on academic adjustment, social adjustment, personal/emotional adjustment (Rice et al., 1995; Vivona, 2000), curricular adjustment, goal maturity, study skills, mental health, and personal relations (Kenny & Rice, 1995) as compared to insecure attached students. It appears that children that derive their positive internal working models of self from a secure attachment relationship may be more motivated and perceive themselves as more competent (Moss & St-Laurent, 2001). Even mild levels of preoccupied (insecure) tendencies are risk factors (Bernier, Larose, Boivin, & Soucy, 2004). Preoccupied (insecure) tendencies have been related to a drop in grades from high school to college (Bernier et al., 2004). Students' academic performance might be at risk when they are faced with a variety of social challenges associated with a change in social an academic environment regardless, of their previous performance in high school (Bernier et al., 2004). Further, preoccupied (insecure) adolescents have less confidence that support is available which leads to less support seeking behaviors when needed (Bernier et al., 2004).

The transition to college is likely to activate the student's attachment system if it is perceived as being stressful. Insecure attachment states could have a negative impact on students' learning dispositions by activating maladaptive coping styles (Larose, Bernier, & Tarabulsy, 2005). The preoccupied (insecure) student might become overwhelmed with the stressors of the new social environment and fail to meet academic

demands while the dismissing (insecure) students may avoid the challenge by not allocating their social resources available (staff, professors and peers) (Larose et al., 2005). Attachment security, on the other hand, might function as a buffer (Larose et al., 2005). Students with attachment security are able to tap into their social resources and, therefore, have an easier time adapting to the new social and academic challenges (Larose et al., 2005). In a study where the academic records of 62 students were collected (first, second, third semester in college) it was found that secure students showed a better learning disposition throughout their transitions and were less likely than insecure (dismissing and preoccupied) students to have a decrease in learning disposition over time (Larose et al., 2005).

During the transition from high school to college, insecure students experienced difficulties. Dismissing (insecure) students showed a slight decrease in examination preparedness during their transition and a decrease in their quality of attention and gave less priority to their academic studies whereas, secure students remained relatively stable (Larose et al., 2005). Further, dismissing (insecure) students showed lower academic performance in their first two years of college (Larose et al., 2005). Enmeshed-preoccupied (insecure) students showed an increase in fear of failure and a decrease in giving priority to studies (Larose et al., 2005). Further, help seeking from teachers and peers decreased in insecure students whereas it remained stable for secure students (Larose et al., 2005).

One study analyzed data from 102 freshman, in order to investigate the relation between attachment state of mind and adjustment to college (Bernier et al., 2004). The researchers found that a preoccupation with attachment was related to an overall poor

adjustment and an overall decrease in adjustment and in grades during their freshman year (Bernier et al., 2004). Dismissing (insecure) attachment tendencies were found to be unrelated to college adjustment (Bernier et al., 2004). Another study, which used the Adult Attachment Interview (AAI), a measure of parental control (Children's Report on Parent Behavior Inventory CRPBI-30) and adjustment to college self-report measure (Student Adaptation to College Questionnaire SACQ), found that students who were preoccupied with attachment had a higher chance of experiencing a drop in grades between high school and college (Bernier et al., 2004). After one year, preoccupied (insecure) tendencies were also more likely to be related to academic and personal/emotional adjustment, as well as goal commitment/institutional attachment (Bernier et al., 2004). The results indicated that preoccupied (insecure) tendencies are related to difficulties in coping with the transition to college (Bernier et al., 2004).

Resource Control Strategies and Adjustment to College

Starting college means, for many freshmen, a transition from their home environment to a residence hall where they are faced with new social challenges, as they have to navigate a much larger social system that is, for the most part, different from high school (Shim & Ryan, 2012). Students live in residence halls where they spend a lot of time with their peers (Shim & Ryan, 2012). Living together with their peers, during this transition, might cause them to overly focus on how they compare to others and how they are perceived based on their social attributes (Shim & Ryan, 2012). Striving to receive positive recognition from peers and securing a high social status may motivate students to engage in status enhancing tactics (Shim & Ryan, 2012). Some might be aggressive while others are prosocial (Shim & Ryan, 2012). Hawley et al. (2009) described this in

her resource control theory, by highlighting that resource control strategies not only influence the way we pursue our resources but also the way we interact with other and how we approach and value social relationships.

It is critically important for students to establish new friendships and positive peer relationships during their first year in college (Shim & Ryan, 2012). Social problems can affect the student's overall well-being and success in college (Shim & Ryan, 2012) as stated in the prior section. Finding out how to better help students navigate their new social environment, can help to promote adjustment to college (Shim & Ryan, 2012). Since college is a social place it is only natural that students seek to achieve social as well as academic goals (Shim & Ryan, 2012). Research on early adolescence has shown that striving for dominance as well as aggressive and manipulative behavior is prevalent and important to social and academic adjustment in school (Hawley, Little, & Rodkin, 2007; Kiefer, Matthews, Montesino, Arango, & Preece, 2013; Kiefer & Ryan, 2008). It has been found that dominance goals are associated with lower levels of engagement for achievement and has a negative impact on academic and social adjustment (Kiefer et al., 2013; Kiefer & Ryan, 2008). How this phenomenon plays out in a college setting has not yet been examined (Hawley et al., 2009; Shim & Ryan, 2012).

Resource control, a form of social dominance, has also been linked to social competence (Hawley et al., 2009). Hawley et al. (2009) proposes that individuals use two broad classes of behavioral strategies to gain and defend resources, which are prosocial or coercive strategies of resource control. While coercive strategies are direct, aversive, and immediate, prosocial strategies are indirect, prolonged, and for the most part require winning group regard (Hawley, 2008). Hawley et al. (2009) distinguishes

between five different resource control strategies: Prosocial controllers, coercive controllers, bistrategic controllers, non-controllers, and typical controllers. Studies conducted with children show that social dominance can affect the way they engage with their environment to control resources (Hawley et al., 2009).

Prosocial controllers are motivated to gain both material and social resources, but they assign different significance to their interpersonal relationships (Hawley et al., 2009). They use social ties as a resource and achieve their goals through prosocial behavior (Hawley et al., 2009). Coercive controllers tend to have negative expectations of social relationships and low expectations of reaching their goals (Hawley et al., 2009). Further, they have the tendency to repel others which often leads to a lack of self-confidence, a lack of social skills and poor self-regulation (Hawley et al., 2009). Bistrategic controllers are different from the coercive controllers by being avoidant but at the same time not avoiding social interactions (Hawley et al., 2009). They avoid intimacy but are able to use social interactions effectively without developing deep connections (Hawley et al., 2009). They are likely to use their social connections to increase their self-image, while at the same time being highly aggressive (Hawley et al., 2009). Hawley (2008) has identified the bistrategic controller as the most successful resource controller, followed by the prosocial controller with the non-controller being the least successful.

To understand students' behavior, motivation, and achievement it is important to know their goals. Goals are a cognitive representation of what will drive their behavior (Kiefer & Ryan, 2008; Rodkin, Ryan, Jamison, & Wilson, 2013). Social goals can be conceptualized as dominance, popularity, and intimacy (Kiefer et al., 2013). Dominance

goals of students focus on wanting to have power over peers, in order to get them to comply with their wishes and to instill fear in others (Kiefer et al., 2013). Popularity goals focus on establishing a high social status (Kiefer et al., 2013). Intimacy goals focus on establishing intimate peer relationships (Kiefer et al., 2013). In Kiefer and Ryan (2008) study looking at sixth and seventh graders, social dominance and popularity goals were associated with disengagement und underachievement. Further, students with social dominance goals showed disruptive behavior and were nominated by peers for not following school rules (Kiefer & Ryan, 2008). Students who pursued intimacy goals were positively associated with engagement and achievement and were striving to have close relationships with friends (Kiefer & Ryan, 2008).

Summary of Literature Review

This study sought to identify how attachment styles, resource control strategies, and achievement motives predict adjustment to college. Adjustment to college is a multidimensional construct comprised of social adjustment, academic adjustment, personal/emotional adjustment, and goal commitment/institutional attachment. Students seek social as well as achievement goals while in college, which highlights the importance of examining variables beyond academic performance that could affect students' success (Kiefer & Ryan, 2008). Adjustment to college has been compared with the "strange situation" and it has been found that students with a secure base have more successful transition to college (Rice et al., 1995). Developing positive peer relationships is important for students' adjustment and is largely influenced by their attachment styles and their social competence (Rice et al., 1995). Resource control strategies have been linked to social competence and Hawley (2008) has identified the bistrategic controllers

as the most successful in resource control. The achievement motive variable tied the study together by looking at how the need to achieve affects adjustment to college independent and in combination with resource control strategies and attachment styles.

Ultimately, the goal of the study was to identify to what degree each variable predicts adjustment to college and what the possible implications for higher education administration are.

Research Questions

Students' challenge is to develop an identity and create intimate bonds with others while at the same time adjust to college life. Research has shown that students that lack achievement motive have difficulty adjusting to college, as it is an important factor for goal direction and identity formation (Baker & Siryk, 1984; Harris, 1940). Further, students who have difficulty developing close intimate bonds struggle with the new academic and social demands (Rice et al., 1995). Prior research points to the impact attachment styles, resource control, and achievement motives have on adjustment to college and is the foundation for the research questions. The purpose is to determine how these variables covary and which variable, if any, affects adjustment to college independently of the others. Finding out which variable(s) predict adjustment to college will add to the existing literature, which could be instrumental in increasing students' adjustment to college.

Research Questions

1. Do attachment styles and resource control strategies covary?
2. Do attachment styles and achievement motives covary?
3. Do resource control strategies and achievement motives covary?

4. Does achievement motivation predict adjustment to college independent of attachment styles and resource control strategy?
5. Does attachment predict adjustment to college independent of achievement motivation and resource control strategy?
6. Does resource control strategy predict adjustment to college independent of attachment styles and achievement motivation?

CHAPTER 3: METHODS

Study Design

This quantitative study used established theories as the basis for examining how and to what degree attachment styles, resource control strategies, and achievement motivation predict students' adjustment to college. The research questions that were based on the literature dictated the types of data that was collected and the way it was analyzed (Newman & Benz, 1998). According to Dewey (1933) the reflective inquire has four basic steps (as cited in Hoy & Adams, 2015):

1. Defining the problem
2. Formulate a hypothesis to solve the problem
3. Testing the hypothesis

The problem of how students' identity and intimacy development affect students' adjustment to college triggered the reflective process. After conceptualizing the problem, a provisional answer was generated in the form of a hypothesis. The hypothesis is seen as the creative process that can be based on experience, observations, reflections or existing theories. The hypotheses that guided this study were:

1. Students strongly motivated to achieve have a better adjustment to college than those who lack motivation.

2. Academic adjustment is further facilitated by social adjustment; and social adjustment is facilitated by secure attachment and non-deployment of coercive resource control.
3. Although students enter college with predispositions toward achievement, attachment, and resource control, colleges and universities can integrate programs into first year seminar, residential life programs that promote personal growth to shape the motivational factors that enhance adjustment. Further, faculty and staff might benefit from training that addresses students' developmental challenges.

Once the hypothesis were identified implications for the outcome were determined.

The research questions evolved from the hypothesis, were geared towards pinpointing factors that predict adjustment to college. The following research questions emerged:

1. Do attachment styles and resource control strategies covary?
2. Do attachment styles and achievement motives covary?
3. Do resource control strategies and achievement motives covary?
4. Does achievement motivation predict adjustment to college independent of attachment styles and resource control strategy?
5. Does attachment predict adjustment to college independent of achievement motivation and resource control strategy?
6. Does resource control strategy predict adjustment to college independent of attachment styles and achievement motivation?

To find the predicators that impact students' adjustment to college, students filled out a variety of self-report measures that have been previously validated to measure the construct of attachment styles, resource control strategies, achievement motive and adjustment to college.

> In our endeavor to understand reality we are somewhat like a man trying to understand the mechanism of a closed watch. He sees the face and the moving hands, even hears its ticking, but he has no way of opening the case. If he is ingenious he may form some picture of a mechanism which could be responsible for all the things he observes, but he may never be quite sure his picture is the only one which could explain his observations. (Einstein & Infeld, 1967)

The constructs measured in this research are the formed pictures of the mechanism that could be potential factors predicting adjustment to college.

Measures of Constructs

This study utilized self-report measures to assess the constructs of social motives (attachment styles, resource control strategies, achievement motive) and adjustment to college in order to identify predictors of adjustment to college. These instruments have been widely used to measure the constructs of attachment styles, resource control strategies, achievement motives, and adjustment to college, but not in this combination to assess how they affect adjustment to college. Finding out how social motives affect adjustment to college could be the platform to develop services and tools for students, faculty, and staff to help students succeed in college. Further, these self-report measures could be adopted to screening tools to measure the outcome of services proposed. The instruments that were used to measure the constructs are: Attachment Style Questionnaire

(ASQ), Resource-Control Strategy Inventory Revised (RCSI-R), Picture Story Exercise (PSE), Picture Story Exercise Questionnaire (PSE–Q), and Student Adaptation to College Questionnaire (SACQ). The self-report measures were administered to domestic, undergraduate full-time students at the University of Bridgeport.

Student adaptation to college questionnaire (SACQ). The SACQ self-report measure is a validated instrument of the construct of adjustment to college. It was originally developed because researchers noticed that students who had difficulty adjusting to college were not seeking help from counseling services (Baker & Siryk, 1986). It was important to them to develop a reliable and valid diagnostic instrument that would make it possible to provide efficient and selective interventions for students (Baker & Siryk, 1986). "An assumption underlying the construction of the scale is that adjustment to college is multifaceted and involves demands varying in both kind and degree and that these demands require a variety of coping responses (or adjustments) that will themselves vary in effectiveness" (Baker & Siryk, 1986, p. 32). The SACQ consists of 67 statements about various experience of adjustment to college, and the students are asked to assess on a nine-point rating scale how each statement applies to them (Baker & Siryk, 1986).

The SACQ consists of four different subscales that measure different aspects of students' adjustment to college (Baker & Siryk, 1999). The academic sub-scale has 24 items, looks at how well a student is coping with academic demands (e.g. "I am not doing well enough academically for the amount of work I put in") (Baker & Siryk, 1999). The social adjustment subscale has 20 items, pertaining to interpersonal-societal demands (e.g. "I have been feeling lonely at college lately") (Baker & Siryk, 1999). The

personal/emotional adjustment subscale contains 15 items, looking at the way students are feeling psychologically and physically in order to assess if they are experiencing general psychological distress and any related somatic problems (e.g., "I have been feeling tense and nervous lately") (Baker & Siryk, 1999). The attachment (goal commitment/institutional attachment) subscale has 15 items assessing students commitment to educational goals and they attachment to the college they are attending (Baker & Siryk, 1999). The questions are especially geared towards the quality of the relationship there is between the student and the institution (e.g. "I am pleased now about my decision to attend this college in particular") (Baker & Siryk, 1999). In addition, the instrument indicates a full-scale score of adjustment to college, which indicates the students' overall adjustment. There are two items on the instrument that are only scored for the full scale score: Item 53 ("I feel I have good control over my life situation at college") and item 67 ("I feel confident that I will be able to deal in a satisfactory manner with future challenges here at college") (Baker & Siryk, 1999).

The SACQ has been used in many developmental studies and has been well received by students (Baker & Siryk, 1986). Students have stated that its use indicates that someone cares and that the items on the scale make them think of themselves in a new and beneficial way (Baker & Siryk, 1986). Further, that the scale is a base to follow up with students that have difficulty adjusting to college and it is a great way to open up discussions with students by focusing on the areas of need (Baker & Siryk, 1986). In post-assessment interviews conducted with students who had been identified as low functioning and high functioning, it was demonstrated that they had been correctly

identified in the majority of the cases (13 out of 14 high-functioning and 13 out of 19 low functioning) (Baker & Siryk, 1986).

Attachment styles questionnaire (ASQ). Attachment theory states that humans have a need for strong affectional bonds, to enhance their chances for survival (Karantzas, Feeney, & Wilkinson, 2010). The attachment behavioral system consists of behaviors that aid in maintaining close proximity, in times of threat or distress (Karantzas et al., 2010). Over time, the attachment system is shaped by the interactions one has with multiple attachment figures that form relatively stable mental representations that can be categorized into different attachment styles (Mikulincer & Shaver, 2007). Thus, attachment styles are formed by generating mental schemas from general rules and expectations, learned through experiences with specific attachment figures (Mikulincer & Shaver, 2007).

Hundreds of studies have looked at how attachment styles affect relationship satisfaction, communication, support seeking and caregiving, which has resulted in numerous self-report measures that can generally be categorized as categorical, forced choice, or dimensional (Karantzas et al., 2010). The Attachment Style Questionnaire (ASQ) is a widely used dimensional measure, which consist of 40 items and five dimensions (Karantzas et al., 2010). The researchers had three interrelated goals in mind when developing the measure, which seemed to be the key limitations of other measures at the time: "(1) to develop a broadly-based measure which could be used to clarify issues concerning the dimensions central to adult attachment and the number of styles needed to define essential individual differences (2) to design a measure suitable for young

adolescents, and (3) to design a measure suitable for those with little or no experience of romantic relationships" (Feeney et al., 1994, p.133).

The prototypes of adult attachment can be described by the model of self and the model of others as conceptualized by Bowlby (as cited in Bartholomew & Horowitz, 1991). There are a total of four different combinations by looking at a person's abstract image of the self and the abstract image one has of others (Bartholomew & Horowitz, 1991). If an abstract image of the self is positive or negative one feels either worthy of love and support or not (Bartholomew & Horowitz, 1991). If an abstract image of others is positive other people are seen as trustworthy, while and negative abstract image of others causes people to see others as untrustworthy (Bartholomew & Horowitz, 1991). Looking further at the dimensions underlying Bartholomew's model, see Figure 1, the items representing preoccupation with relationships and need for approval pertain primarily to the self, while the discomfort with closeness and relationships as secondary assess the attitudes towards others (Feeney et al., 1994). The confidence scale assesses the attitudes to both the self and others (Feeney et al., 1994).

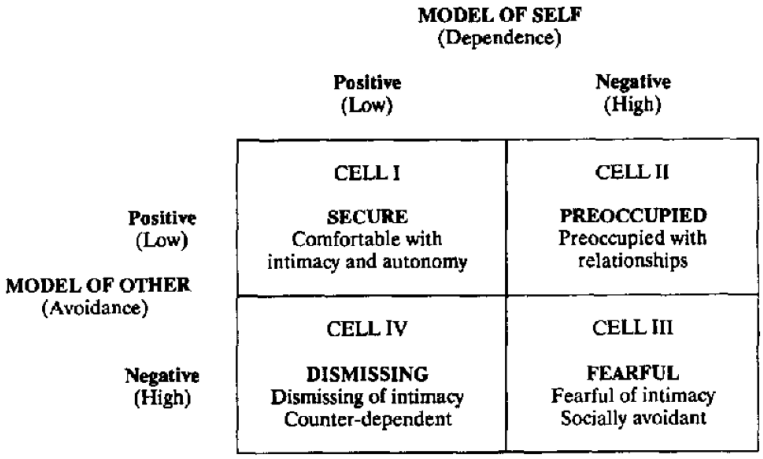

Figure 1. The four attachment patterns derived from a combination of the two dimensions. Adapted from "Attachment styles among young adults: A test of a four-category model" by Bartholomew & Horowitz, 1991, *Journal of Personality and Social Psychology*, *61*(2), 227. doi:10.1037/0022-3514.61.2.226

To ensure that the critical ideas by Ainsworth (1979) and Bowlby (1973) were considered, their concepts were the basis of the ASQ (Karantzas et al., 2010). Initially the measure consisted of 65 items that were later reduced to 40 by removing items with low communalities (Feeney et al., 1994). Five factors were discovered: discomfort with closeness, relationships as secondary (to achievement), need for approval, preoccupation with relationships, and confidence (in self and others) (Feeney et al., 1994).

The constructs covered in the 65 items were derived from both three- and four-group models of adult attachment, paired with themes of infant attachment theories (Table 3) (Feeney et al., 1994). Some of the items were chosen from forced choice measures or earlier measures while others were specifically developed for this measure (Feeney et al., 1994). The ASQ was administered to 470 young adults, who were university students (Feeney et al., 1994). They had to rate the items on a six-point scale (1=totally disagree to 6=totally agree) (Feeney et al., 1994).

Table 3

Constructs included as part of the ASQ

	Positive view of self	Negative view of self
Positive view of other	Self-esteem Comfort with closeness Trust Healthy dependence	Overdependence Interpersonal anxiety Aloneness Desire for approval Lack of confidence Preoccupation with relationship
Negative view of other	Avoidance of intimacy Lack of trust Value of independence Compulsive self-reliance Emphasis on achievement	Low self-esteem Lack of trust Interpersonal anxiety Desire for contact and intimacy Need for approval Aloneness Anger/Hostility

Note. The attachment system's major features, as articulated by Bowlby and Ainsworth. Adapted from "Is less more? Confirmatory factor analysis of the Attachment Style Questionnaires" by Karantzas, G. C., Feeney, J. A., & Wilkinson, R., 2010, *Journal of Social and Personal Relationships*, *27*(6), 749–780.

The results of the study showed that the three-factor solution accounted for 35.7 percent of the total variance whereas the five-factor model accounted for 43.3 percent total variance (Feeney et al., 1994). The three factors identified were labeled security, avoidance and anxiety, whereas the five-factors included confidence (in self and others), discomfort with closeness, need for approval, preoccupation with relationships, and relationships as secondary to achievement (Feeney et al., 1994). Confidence describes a secure attachment styles, while the other four factors represent a particular factor of insecure attachment (Feeney et al., 1994). Discomfort with closeness, is seen in individuals with avoidant attachment (Feeney et al., 1994). The need for approval is characteristic of both fearful and preoccupied individuals and reflects the need of wanting

to be accepted and confirmed by others (Feeney et al., 1994). Preoccupation with relationships (anxious ambivalent) is characterized by anxiously reaching out to others in order to fulfill dependency needs (Feeney et al., 1994). Relationships as secondary to achievement (dismissing) is characterized by an emphasis of achievement and independence, so they reduce their chance of being vulnerable and possibly getting hurt by others (Feeney et al., 1994).

The key for the development of the ASQ was to have a measure that would be suitable for young adults with no or very little experience with romantic relationships (Feeney et al., 1994). The existing measures at the time, were not able to capture adolescents and young adults that still had to progress through the developmental task of forming their identity and establishing intimate relationships (Feeney et al., 1994). Feeney et al. (1994) used the information gathered through empirical research and the ideas of Ainsworth (1979) and Bowlby (1969), to develop an instrument that would be suitable for a college student population.

Resource-control strategy inventory Revised (RCSI-R). The Resource-Control Strategy Inventory Revised (RCSI-R) has been developed to assess the way in which individuals attain their dominance goals along the prosocial and coercive dimension (Hawley, 2006). Learning how to attract others to obtain the resources one needs, is a major developmental task (Charlesworth, 1996). "Social competence may entail a balancing of the need to get along (being liked, accepted) and to get ahead (effectiveness, power)" (Hawley, 2003, p. 281). To determine how resource control strategies impact adjustment to college and how these dimensions are related to achievement motives and attachment styles, the RCSI-R was administered. This instrument consists of 22 items

that measure behavior strategies related to accessing material, social, and informational resources (see Appendix M) . Hawley (2003) identified five different resource control strategies: Prosocial, coercive, bistrategic, typical, and non-controllers. Bistrategic controllers, who are displaying coercive as well as prosocial strategies tend to be the most successful at resource control and social dominance (Hawley, Little, & Card, 2008) while non-controllers had many adjustment difficulties (Hawley, 2010). In addition, the instrument consists of 11 items that assess explicit dominance motivation (resource control) (see Appendix M).

The construct of social dominance relates to the predictable social and mental health outcome in children, adolescence, and adults (Johnson et al., 2012). Social dominance is the motive to get power (Johnson et al., 2012). Power is the control over resources, and dominance strategies are behaviors that enhances the ability of individuals to control social and material resources (Johnson et al., 2012).

> Dominance coupled with hostility can involve antisocial strategies for taking resources and threatening subordinates, such as manipulative behavior, intimidation, and social or physical aggression. Dominance coupled with warmth can take prosocial forms, such as alliance formation and cooperation, reciprocal resource exchange, engagement in high status (socially valued) behaviors, leadership, and persuasion (Hawley, 2002). (as cited in Johnson et al., 2012, p. 693)

Dominance and aggression often go hand in hand but prosocial strategies may be more effective in getting the desired social and material resources (Johnson et al., 2012). It is

thought to be an important developmental goal to use more adaptive strategies to control material and social resources (Johnson et al., 2012).

Resource control develops in early childhood but how it plays out in young adulthood is not well-known. However, studies on adolescents have shown that resource control strategies impact their social and academic adjustment in school (Kiefer et al., 2013; Kiefer & Ryan, 2008). Hawley has conducted extensive studies with young children and found that after the age of five children who exhibit coercive strategies are rejected from peers (Hawley, 2014b), while children who use prosocial strategies are socially appealing (Hawley, 2007). Resource control strategy in conjunction with attachment styles is a way of measuring a type of social competence and, in this study we propose that achievement motives might be a way to buffer social challenges that affect adjustment to college.

Picture story exercise (PSE) and picture story exercise questionnaire (PSE-Q). The Thematic Apperception Test (TAT) developed by Murray, was widely used and at the same time inspired many controversial discussions pertaining to its predictive validity (Rozhkova, 2011). Murray (1938), was looking for a way to tap into individual's implicit motives without the interference of their defense mechanisms, which might cause a person to repress unacceptable wishes and/or want to present oneself in a positive light. He believed that people would write stories in which the main character would represent their life experiences, motives, and needs (Murray, 1938). For example, if a participant would write a story (see Figure 2) about wanting to be the best violinist, it could be assumed that the participant is motivated to strive for excellence (Langens & Schüler, 2002).

Figure 2. First card of the Murray's TAT's. It shows the boy Jehudi Menuhin, who sits in front of his violin. Adapted from "Die Messung des Leistungsmotivs mittels des Thematischen Auffassungstest," by Langens & Schüler, 2002, In F. Rheinberg & Joachim Stiensmeier-Pelster, *Diagnostik von Motivation und Selbstkonzept*, pp. 89–104, Hogrefe Verlag.

Murray was also inspired by personal experience (Langens & Schüler, 2002). When Murray's father died, his mother said after just a few months that she was no longer mourning his death (Langens & Schüler, 2002). However, when Murray presented her with the TAT test cards his mother was telling stories about women who were devastated to have lost a loved one (Langens & Schüler, 2002). It encouraged him in his believe that the TAT was tapping into people's unconscious needs and motives (Langens & Schüler, 2002).

However, Murray's way of using the TAT always seemed too subjective. It was McClelland and his collogues' mission to develop an objective key to score the stories (McClelland et al., 1953). They wanted to establish empirical evidence that the imaginative stories were an indication of achievement motive (McClelland et al., 1953). The question was: how do we know that these imaginative stories are an indication of a

personal attribute such as achievement motive? (Langens & Schüler, 2002). In order to find out, McClelland and his colleagues had students write imaginative stories in a condition where the achievement motive was stimulated and compared them with other participants' stories in the control group with no achievement motive stimulation (McClelland et al., 1953). It was proven through a variety of experiments that the stories written under the achievement motive condition differed from the stories written in the neutral condition (McClelland et al., 1953). It is therefore believed that an individual writing imaginative stories with achievement motive content, without being in a achievement motive condition, is motivated to achieve (Langens & Schüler, 2002).

McClelland and his colleagues (1989) explored the achievement motive further and divided the achievement motive in implicit (measured with the TAT) and explicit achievement motive (measured with self-report questionnaires). McClelland wanted to prove that implicit achievement motives were unconscious determinants of behavior (McClelland, 1999). "These two motivational systems differ with respect to the goal states which are pursued, the incentives to which they respond, and the type of behavior they elicit" (Langens, 2007, p. 49). McClelland and colleagues (1989) defined them as the need to achieve (implicit achievement motive) and valuing achievement (explicit achievement motive).

The administration and content changes made by McClelland et al. (1989) led to a change of name from TAT to Picture Story Exercise (PSE) and Picture Story Exercise Questionnaire (PSE-Q) for the self-report measure assessing explicit motives. The PSE consists of several picture cues that are used to measure implicit achievement motives. To each picture in the PSE, the participant will see the instruction to write an imaginative

story, which is coded for achievement motive. The first step to construct a valid PSE is to choose the right number of pictures (Schultheiss & Pang, 2007). It is recommended to choose between four and five (Schultheiss & Pang, 2007). The kinds of pictures selected then depend on their cue strength, cue ambiguity, universality, relevance, and extensity (Schultheiss & Pang, 2007). For this research, the PSE consists of four picture cues used by Rozhkova (2011) in her dissertation research. In her research, the participants were two groups of undergraduate university students. The first group was enrolled in the Business Psychology program and the other group enrolled in a Psychology program (Rozhkova, 2011). She had two sets of pictures that contained three picture cues.

In this study, the researcher chose two from each set, which made it four in total ("girl with a laptop," "student at an information board," "student and professor," and "boxer"). The students, in this research, were given the standard instruction for the computer administration except that there was no time limit on how long they were allowed to write the story.

The PSE-Q content matched consist of three picture cues with each of them having 10 Likert scale questions that were identical to each picture cue. The picture cues were chosen from the PSE-Q administered by Rozhkova (2011) ("girl with a laptop," "student at an information board," and "student and professor"). In the explicit measure of achievement motive, participants can endorse self-descriptive items that are covered by the PSE. It is a self-report measure where the assumption is being made that there is a correspondence between what a person says and does (Rozhkova, 2011).

Concept Map

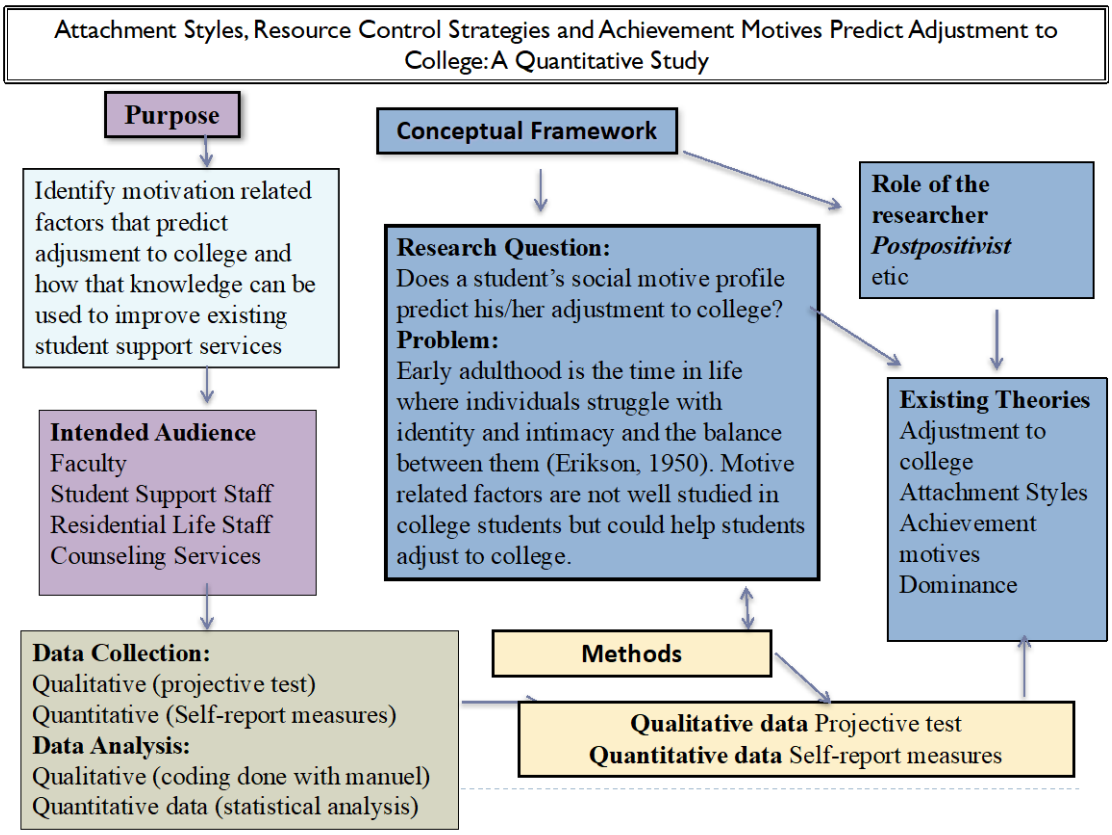

Figure 3. Concept map of attachment, resource control strategies and achievement motive predict adjustment to college: A quantitative study.

Role of the Researcher

Crotty (1998) developed four basic elements that framed this study: Methods, methodology, theoretical perspective, and epistemology. Four self-report measures that assessed explicit achievement motive, attachment styles and resource control strategies and adjustment to college (PSE-Q, ASQ, RCSI-R, SACQ) and one projective measure that assessed implicit achievement motive (PSE) were used (methods) to look at factors that predict students' adjustment to college. The qualitative data collected via the projective test was quantified, which made this research quantitative in nature (methodology). The post-positivist philosophical stance (theoretical perspective), was

the lens through which the data was analyzed. Objectivism is the philosophical grounding (epistemology) was the foundation of this study, as it was based on the belief that an objective truth can be attained (Crotty, 1998). The epistemology deals with the nature of knowledge and its possible scope, which laid the foundation for the theoretical perspective of this study (Crotty, 1998). "Objectivism is the epistemological view that things exist as meaningful entities independently of consciousness and experience, that the truth and meaning residing in them as objects ('objective' truth and meaning therefore), and that careful research can attain that objective truth and meaning " (Crotty, 1998, p. 5). Post-positivist is the theoretical perspective on which the quantitative study is based.

The worldview is a basic set of beliefs that guide the researcher's actions through the research process (see Table 4) (Creswell, 2007). This quantitative study was guided by a post-positivist worldview to find what the predictors of adjustment to college are and how we can use that knowledge to propose possible solutions. The process (methodology) of the study is guided by the deductive (theory $\Rightarrow$ hypothesis $\Rightarrow$ observation $\Rightarrow$ confirmation/rejection) approach. The theories of social motives pertaining to adjustment to college were the basis for this study and guided the formulation of the hypothesis and the consequential research questions that defined the way the data was collected. The data was then used to assess what the predictors of college adjustment are. As a post-positivist the researcher I took an outsider's perspective by confirming well-established theories of attachment, social dominance, achievement motives and adjustment to college (Teddlie & Tashakkori, 2009).

Table 4

Worldview Matrix

Researcher's Worldview	Post-positivism
Ontology: (What is the nature of reality)	The researcher believes that there is a singular reality that can be tested by either rejecting or by failing to reject the hypothesis stated. The researcher is taking an outsider (etic) perspective by using quantitative self-report measure and a qualitative projective test.
Epistemology: (Knowledge)	The researcher was an outsider during the data collection and the analysis. The knowledge was created through objective data collection. The data was collected by using quantitative self-report measures and a qualitative projective test. Measures used: 1. Demographic Questionnaire 2. Attachment Style Questionnaire (ASQ) 3. Resource-Control Strategy Inventory Revised (RCSI-R) 4. Implicit Level Picture Story Exercise (PSE) and at the explicit level Picture Story Exercise Questionnaire (PSE–Q) 5. Student Adaptation to College Questionnaire (SACQ) The qualitative data was quantified using a pre-existing coding rubric and the entire data set was analyzed using descriptive, correlational, and regression analysis. In addition, reliability and construct validity analysis were performed to determine if the instruments are measuring the constructs and if they do so reliably.
Axiology: (Values)	The researcher distanced herself from her own biases by minimizing the influence of her own believes. Therefore, the majority of the data was collected via quantitative self-report measures and the participants were assigned a number, so that they names did not appear on any instruments. The qualitative data collected from the projective test was quantified by strictly following the coding guidelines by the pre-determined rubric. Before coding the qualitative data, the researcher practiced extensively by using the scoring manual that was recommended for becoming proficient in assessing achievement motive in the Picture Story Exercise(PSE).
Methodology: (Process)	Through a deductive approach, the researcher is testing a priori theories via quantitative data. Theory $\Rightarrow$ Hypothesis $\Rightarrow$ Observation $\Rightarrow$ Confirmation/Rejection Theories: Resource control strategies, attachment styles, achievement motivation, and adjustment to college Hypothesis: Student's social motive profile predicts his/her adjustment to college.

	Observation: validated self-report measures and a projective test measured variables and they were quantified to analyze how and to what degree they predict adjustment to college. Confirmation/Rejection: Rejecting or failing to reject my hypothesis

Note. Worldview Matrix. Adapted from "Designing and Conducting Mixed Methods Research" by J. W. Creswell and V. L. P., 2011, Clark, *Designing and Conducting Mixed Methods Research.* Copyright by SAGE.

Bounding the Case

The study was conducted at a small private university in the northeast, with participants conveniently and purposefully selected from the student population (Creswell, 2009). The research will take place during the 2015/2016 academic year. The selection criteria for the participants (domestic undergraduate students) in this research, was both convenient and purposeful (Creswell, 2009; Maxwell, 2012).

One hundred thirteen domestic undergraduate students were recruited in pre-selected classrooms to ensure an adequate distribution of freshman, sophomores, juniors and seniors. The principle investigator (P.I.) went into the classrooms and talked to students about the research. If the students wanted to participate, they were able to put their name, email, and phone number on a list. The students were told that putting their name on the list was non-binding but that it would be used to contact them in order to provide more information about the study. The professors in the pre-selected classrooms agreed to give students extra credit in their class for their participation and provided an alternative assignment for extra credit if students decided that they did not want to participate in the study but still would like the extra credit.

Data Collection

One hundred and thirteen domestic full-time undergraduate students were recruited at a small urban university in the northeast to fill out a series of self-report measures (quantitative & qualitative) that were measuring the constructs of attachment styles, resource control, achievement motive and adjustment to college: Attachment Style Questionnaire (ASQ), Resource-Control Strategy Inventory Revised (RCSI-R), implicit level Picture Story Exercise (PSE) and at the explicit level Picture Story Exercise Questionnaire (PSE–Q), and Student Adaptation to College Questionnaire (SACQ), see Table 5. The students added their name to the list indicating interest and were later contacted via email by the researcher to confirm their interest and to schedule a time that they would be available to fill out the measures. Approximately 15 students met each time, to fill out the self-report measures in a computer lab at the university campus. The majority of the measures were accessed online via survey monkey, except the demographic questionnaire and the SACQ. The demographic questionnaire and the SACQ were given to the students prior to the online survey monkey instruments and were collected once they were filled out. Each student was assigned a number when they entered the computer lab and the self-report measures were then linked to each other via that number, to be able to correlate the measures and to ensure anonymity.

Table 5

Data Collection Overview

Time line	Procedures
(A) (paper survey)	Topic: Demographic Information Time: About 10 min Data: Quantitative (Survey) Instrument: Demographic Survey
(B) (paper survey)	Topic: Adjustment to college Time: About 15-20 min Participants: Undergraduate students Instrument: Students Adaptation to College Questionnaire (SACQ)
(C) (survey monkey)	Topic: Implicit achievement motivation Time: About 20 min (About 5 minutes for each story) Data: Qualitative (Instrument) Instrument: Picture Story Exercise (PSE)
(D) (survey monkey)	Topic: Explicit achievement motivation Time: About 10-15 min Data: Quantitative (Instrument) Instrument: Picture Story Exercise Questionnaire (PSE-Q)
(E) (survey monkey)	Topic: Attachment styles Time: About 20 min Data: Quantitative (Instrument) Instrument: Attachment Style Questionnaire (ASQ)
(F) (survey monkey)	Topic: Resource Control Strategy Time: 10-15 min Data: Quantitative (Instrument) Instrument: Resource-Control Strategy Inventory Revised (RCSI-R)

Note. Fall Semester 2015 **i**nitial quantitative and qualitative data gathering for undergraduate students at a small urban university in the northeast.

Data Analysis

The quantitative data collected from self-report measures were analyzed using Excel, R and JASP. Descriptive statistics and histograms were generated for all data to determine normality. A correlation matrix determined the variables that were significantly correlated to each variable and to adjustment to college and its subscales. A regression model was used to examine the motives that predicted adjustment to college. Motive variables were assessed for inter correlation and a multi-regression analysis was used to determine what joint affect attachment styles, social dominance (as measured by Resource-Control Strategies Inventory Revised), and achievement motive have on adjustment to college and to what degree.

The qualitative data, assessing the participants' implicit achievement motive, was measured by the PSE. The imaginative stories, written to the picture cues was content-coded for achievement motive, according to the scoring manual for the achievement motive (Appendix I) that has been adapted to the suggestions made by Blankenship, Romero, Vega, Keenan, & Ramos, (2005) and McClelland et al. (1953). The two subcategories Nurturant Press (Nup) and Achievement Thema (Ach Th) in the original scoring manual will not be coded (see original scoring manual Appendix L). In addition, two other subcategories Personal Obstacle (Bp) and Environmental Obstacle (Bw), were combined into one category Block to Achievement (B) because it was found that those had great overlap with each other (Blankenship et al., 2005).

The researcher, used a professional qualitative data analysis software MAXQDA (Creswell & Clark, 2011), to analyze the data. The different codes were color-coded and

their respective numerical value was applied to calculate the total implicit achievement motive score.

Credibility

In this study quantitative and qualitative data were collected concurrently using self-report measures and a demographic questionnaire (Creswell & Clark, 2011). The participants were full-time domestic undergraduate students from a small university in the northeast, who were recruited in different level courses across a variety of disciplines (psychology, human services, dental hygiene, business, first year seminar, capstone ect.). The students, who were interested in participating in the study scheduled a time to meet with the researcher in order to fill out a serious of self-report measure in the computer lab at the university.

Quantitative validity is ensured when the data being collected represents the constructs being measured (Creswell & Clark, 2011). The measures selected for this study, were extensively validated for the constructs investigated in this study. In the quantitative part of this research, the constructs of adjustment to college, attachment styles (social bonds), social dominance (resource control strategies), and explicit achievement motivation were measured. The measures used for these constructs were Student Adaptation to College Questionnaire (SACQ), Attachment Style Questionnaire (ASQ), Resource-Control Strategy Inventory Revised (RCSI-R), and Picture Story Exercise Questionnaire (PSE-Q). These quantitative self-report measures have shown evidence of construct validity and criterion validity in numerous studies using a similar population (Baker & Siryk, 1984; Feeney et al., 1994; Hawley et al., 2009; Rozhkova, 2011).

Student adaptation to college questionnaire (SACQ). The SACQ was purchased from the Western Psychological services. The self-report measure was developed by Baker & Siryk (1984) and has shown high internal consistency and test-retest scores as well as high validity when administered to college students. Coefficient alpha for the 67-item version collected over several years from first and second semester freshmen students at three institutions, ranged between .92 and .95 for the full scale, .81 and .90 for the academic adjustment subscale, between .83 and .91 for social adjustment subscale, between .77 and .86 for the personal/emotional adjustment subscale, and between .85 and .91 for the attachment subscale (goal commitment/institutional attachment) (Baker & Siryk, 1999). Further, statistically significant relationships have been found between the subscales and several criterion variables that are expected to be differentially relevant to the subscales (Baker & Siryk, 1999).

Studies conducted with an undergraduate student population found that there was a significant positive correlation between the full-scale score and GPA (Baker & Siryk, 1999). Further, students in good academic standing had a higher score on the academic subscale than students who were not in good standing (Baker & Siryk, 1999). The social adjustment subscale was validated by being significantly correlated to two criteria, social activities list and outcome of dormitory assistant position application (Baker & Siryk, 1999). The personal/emotional subscale was validated by being significantly related to students seeking counseling services. Goal commitment/institutional attachment was significantly related to students retention (Baker & Siryk, 1999).

Attachment style questionnaire (ASQ). The ASQ was developed with the goal to create a new measure of attachment styles that was not geared towards romantic

relationships (Feeney et al., 1994). Feeney et al. (1994) created a self-report measure that was geared towards assessing the differences in attachment styles in young adults and adolescents, who had limited or no experience with romantic relationships. Initially the measurement had 65 items that were reduced to 40 items that were rated on a six-point scale from 1 = totally disagree to 6 = totally agree (Feeney et al., 1994).

The Reliability of the measure has been evaluated with university students and early adolescents (Feeney et al., 1994). The coefficient alpha for the three factors were .83 (security), .83 (avoidance), and .85 (anxiety). The coefficient alphas of five subscales from a sample of 470 subjects were .80 (confidence in self and others), .84 (discomfort with closeness), .79 (need for approval), .76 (preoccupation with relationships), and .76 (relationships as secondary) (Feeney et al., 1994). The test-retest reliability was calculated with a subsample of 295 students. The coefficient alphas were .74 (security), .75 (avoidance), and .80 (anxiety) for the three scales over a period of approximately ten weeks (Feeney et al., 1994). The coefficients for the five scales were .74 (confidence), .74 (discomfort), .78 (need for approval), .72 (preoccupation with relationships), and .67 (relationships as secondary) (Feeney et al., 1994).

The validity of the instrument was calculated with the same subsample by correlating three attachment scales of the Attachment Style Questionnaire. All three were significantly correlated: Security correlated negatively with avoidance (r=-.49) and with Anxiety (r=-.29); in addition, avoidance correlated positively with anxiety (r=.35)" (Feeney et al., 1994, p. 133). A pairwise correlations between the five scales of the

Attachment Style Questionnaire were also significant: Confidence correlated negatively with the other four scales and the four scales measuring aspects of insecurity were positively intercorrelated (Feeney et al., 1994).

Resource-control strategy inventory revised (RCSI-R). The Resource-Control Strategy Inventory Revised assessed the way individuals attain their goals along the prosocial and coercive dimension (Hawley, 2006). The self-report measures alpha reliabilities, ranged from .76 to .78 for coercive resource control and .79 to .80 for prosocial resource control (Hawley et al., 2008) and it was further validated by peer nomination (Hawley, 2003; Hawley, Little, & Card, 2007). The distribution of the five resource control types (bistrategic controllers, prosocial controllers, coercive controllers, noncontrollers, and typical controllers) are divided into thirds (Hawley, 2006).

Picture story exercise questionnaire (PSE-Q). The PSE-Q, a self-report measure that was used to assess student explicit achievement motive (Rozhkova, 2011). The self-report measure consists of 30 items (three picture cues with 10 questions each). The PSE-Q demonstrated high reliability by comparing all three parts, with an alpha level range between $\alpha = .79$ and $\alpha = .81$ (Rozhkova, 2011). The construct validity was confirmed by correlating the PSE-Q with the established explicit achievement motive measure LMI-K (Leistungsmotivationsinventar) and turned out to be highly significant ($r = 40^{**}$, $p < .001$) (Rozhkova, 2011). The picture cues chosen for this research were "girl with a laptop," "student and professor," and "student at an information board" modeled after past research done by Rozhkova (2011). She used two factors to analyze the data, as illustrated in Table 6.

Table 6

PSE-Q Factors

Factor 1 Presence of the strong explicit achievement motive		Factor 2 Absence of the strong explicit achievement motive	
N	I would like to solve the problem at hand and do my best for that.		
G+	I would be very glad to get the recognition for my good performance in this situation.	G-	I would not care if I did not understand the current issue.
I+	I would work with caution and concentration to solve the existing problem.	I	I would not care if I did not understand the current issue.
AI3	It would be important for me to get new ideas or acquire new skills as a result of my actions.	AI2	I would work with caution and concentration to solve the existing problem.
Ga+	I would expect that what I might learn from this situation will lead to something meaningful.	Ga-	It would make no difference for me if the task was carried out without result.

Note. Adapted from "Measurement of the implicit and explicit achievement motive: New perspectives" by M. Rozhkova, 2011, lmu. Retrieved from http://edoc.ub.uni-muenchen.de/13558/.

Picture story exercise (PSE). The implicit n achievement motive was assessed through the Picture Story Exercise (PSE). The participants wrote imaginative stories about four picture cues in Table 7. The pictures depicted people in different achievement situations (school and work context), which were then coded for themes outlined by McClelland et al. (1953). The participants followed standard instructions for the computer administration of the PSE (Schultheiss & Pang, 2007) with the exception that no time limit was imposed on how long they could look at the picture cue and how long they were writing each imaginative story. Instead, the participants were not able to return to an image or to the story once they clicked "next," which had the effect of not being able to revisit the picture cue no the written story. This change was made, as concerns

were voiced that a time limit might impact the quality of the stories (Rozhkova, 2011). The participants were instructed to type their stories into windows on the screen with the guiding questions above. These improvements were suggested by Blankenship et al. (2005, 2006) and were previously implemented by Rozhkova (2011).

Table 7

Picture Set of PSE

1) Girl with a laptop

3) Student and professor

2) Student at an information board

4) Boxer*

Note: One set of picture cues for the arousal of Implicit Achievement Motive. Picture cues 1, 2, 3 – new picture cues, probed in the current study (can be found in Appendix A); Picture cue 4* - old picture cue, are widely researched and proved to be a high pull for the achievement motive. Adapted from "Measurement of the implicit and explicit achievement motive: New perspectives" by M. Rozhkova, 2011, lmu. Retrieved from http://edoc.ub.uni-muenchen.de/13558/.

The picture cues were coded for achievement motivation, with the help of a qualitative statistical program MAXQDA, according to the Scoring Manual for Achievement Motive by McClelland et al. (1953). The original coding procedure was improved by not coding for Nuturant Press (Nup) and Achievement Theme (Ach Th) and by combining the subcategories Personal Obstacle (Bp) and Environmental Obstacle (Bw) into the Block Achievement (B), as it was suggested by Blankenship et al. (2005) and Rozhkova (2011). It simplified the coding and made it more accurate, as it was found in previous studies that the two categories had great overlap in.

The different codes were color-coded and their respective numerical value was applied to calculate the total implicit achievement motive for each participant. To increase reliability of the scores the researcher was trained with the practice manual to code the stories. McClelland et al. (1953) pointed out that the TAT-based measures have low reliability when comparing the scores from different pictures. However, the inter-coder reliability was typically by 85%. Another study by Schultheiss and Pang (2007), showed a retest coefficient of rtt= .71 (retest interval one day), rtt= .60 (one week), rtt= .52 (one month) & rtt= (one year).

To increase objectivity, reliability, and validity of the PSE score the following selective guidelines by Rozhkova (2011) that pertained to this study were implemented:

- Using an appropriate number of picture cues with enough picture cue strength, ambiguity, universality, extensity, and relevance
- Using picture cues that fit to the particular social context of the participant
- Giving instructions in a non-directive and neutral manner (computer administration)

- Scoring the stories by using the four prompts for each picture cue
- Administer instrument to a heterogeneous group

Schultheiss and Brunstein (2001) suggested that picture cues that elicit motive imagery in about 50% of participants could be seen as a strong stimulus. The picture cues chosen for this research were "girl with a laptop," "student and professor," "student at an information board," and "boxer" because they have elicited high achievement motive imagery in previous studies and because they seem to best represent the social context of the universities full-time domestic undergraduate students. In the study conducted by Rozhkova (2011), the picture cue "girl with a laptop" elicited achievement motive in 60% of the participants, the picture cue "student and professor" showed achievement motive in 73% of the participants, the picture cue "student at an information board" elicited achievement motive in 78% of participants, and the "boxer" elicited achievement motive in 82% of participants. The research participants in her study were undergraduate college students recruited from two different universities, which fits the target population of this study.

Human Subjects

To gain approval to conduct research on human subjects, this research proposal went through the University's Institutional Review Board (IRB). The study was approved and proper protocol was followed throughout the process. A consent form (Appendix A) was administered to participants prior to collecting the data and all individuals will remain anonymous.

CHAPTER 4: RESULTS

Participants

One hundred and thirteen domestic undergraduate students participated in this research. Participants were between the ages of 18 and 41 (M= 21.17 and SD= 3.95); 85 (75.2%) were female and 28 (24.8%) were male. They had completed an average of 2.59 $\pm$ 1.07 years of study. Forty (35.4%) participants were Black or African American, 20 (17.7%) were Caucasian, 24 (21.2%) Hispanic, 10 (8.8%) Asian, and 19 (16.8%) were other.

Measures

The measures used in this study were the Student Adaptation to College Questionnaire (SACQ), Attachment Style Questionnaire (ASQ), Resource-Control Inventory Revised (RCSI-R), Picture Story Exercise Questionnaire (PSE-Q) and the Picture Story Exercise (PSE). Data from all measures and their subscales were normally distributed within three standard deviation of the mean.

Student adaptation to college questionnaire (SACQ). The total SACQ and SACQ subscale results were normally distributed and resembled the normative data provided in the SACQ Scoring Manual (Baker & Siryk, 1999) (Table 8). The SACQ total mean score of 414.1 was in the 34-38th percentile according to national averages generated by the SACQ authors. The academic subscale mean score of 151.2 was in the 54th-58th percentile, the social subscale mean score of 123.1 was in the 31th-42th

percentile, the personal/emotional mean score of 77.28 was in 16th-21th percentile rank, and the goal commitment/institutional attachment mean score of 101.3 was in the 38th percentile rank. These percentile scores represent how the sample in this study compares to normative samples of first and second semester freshmen. Overall, percentile scores, except the academic subscale of the SACQ are below the national average. Furthermore, it should be noted that the personal/emotional subscale was substantially below the average, indicating that this population of students is at risk for mental health issues. The subscale scores correlated significantly with one another and with the total score (Table 13).

Table 8
SACQ Descriptive Statistics

Measures	Item #	n	Mean	SD	SEM	Min.	Max.
SACQ Total	67	109*	414.20	67.40	6.45	251.00	549.00
SACQ Academic	24	109*	151.20	28.13	5.30	77.00	206.00
SACQ Social	20	109*	123.10	25.73	5.07	51.00	180.00
SACQ Personal	15	109*	77.28	22.73	2.17	32.00	129.00
SACQ Institutional	15	109*	101.30	19.01	4.36	50.00	135.00
SACQ Total w/o Personal **	52	109*	336.90	52.16	4.99	213.00	437.00

Note. *Four participants excluded because of missing data. **SACQ Total w/o the personal subscale gives an index of adjustment that does not include mental health issues. SD (Standard Deviation), SEM (Standard Error of the Mean), institutional (goal commitment/institutional adjustment, personal (personal/emotional)

Resource-control strategy inventory revised (RCSI-R). The 22-item Resource-Control Strategy Inventory Revised assesses coercive (coercive subscale) and prosocial (prosocial subscale) strategies for the acquisition of social power (or resources), and general motivation to achieve social power (resource control subscale) as illustrated in Table 9. Five categories of individuals based on resource control strategies were

created by dividing the distributions of responses on the prosocial and coercive subscales into thirds (Hawley et al., 2009). Bistrategic controllers are above the top 66th percentile on both the coercive and prosocial subscales; prosocial controllers score above the top 66th percentile on the prosocial subscale and low or average on the coercive subscale; coercive controllers score above the top 66th percentile on the coercive subscale and average or low on the prosocial subscale; non-controllers score below the lower 33rd percentile on both the coercive and prosocial subscales; typical controllers score less than the 66th percentile on both the coercive and prosocial subscales but not below the 33rd percentile on both (Hawley et al., 2009). There is no total RCSI-R score that is meaningful. Table 9 displays the descriptive statistics for the 22-item Resource- Control Strategy Inventory Revised (RCSI-R).

Table 9

RCSI-R Descriptive Statistics

RCSI Component	Item #	n	Mean	SD	SEM	Min.	Max.
Total	22	113					
Coercive	6	113	9.61	5.69	.78	6.00	36.00
Prosocial	6	113	17.88	8.27	.78	6.00	42.00
Resource Control	10	113	36.98	13.42	1.26	12.00	65.00

Note. SD (Standard Deviation), SEM (Standard Error of the Mean).

Attachment style questionnaire (ASQ). The Attachment Style Questionnaire is a 40-item general adult attachment measure. The participants rated each question on a 7-point Likert scale instead of a 6 point likers scale modeled after Hawley et al. (2009) research, to effectively correlate the scores from both RCSI-R and ASQ. The preoccupation subscale and the need for approval subscale sum to create a subscale (attachment anxiety) that assesses attachment anxiety. The ASQ scores were normally

distributed and similar to those reported in prior literature (Karantzas et al., 2010), as displayed in Table 10. The ASQ total score is not meaningful, only subscale scores were used.

Table 10

ASQ Descriptive Statistics

ASQ Subscales	Item #	n	Mean	SD	SEM	Min.	Max.
Confidence	8	113	32.70	4.635	.4360	22.00	46.00
Attachment Anxiety	15	113	55.67	16.83	1.583	15.00	97.00
Preoccupation	8	113	31.73	9.345	.879	8.00	54.00
Need for Approval	7	113	20.51	8.038	.756	6.00	38.00
Relationships as Secondary (RaS)	7	113	22.01	7.997	.7523	7.00	49.00
Discomfort with Closeness (DwC)	10	113	46.97	9.450	.8889	26.00	70.00

Note. SD (Standard Deviation), SEM (Standard Error of the Mean).

Picture story exercise questionnaire (PSE-Q) and picture story exercise (PSE). The PSE-Q is a 30 item self-report measure that assesses the explicit achievement motive using the same pictures as the PSE (described below). A previous factor analysis of three sets of 10 items each revealed a two-component factor structure (Rozhkova, 2011). The questions highly loaded on Factor 1 indicate the presence of strong explicit achievement motivation and Factor 2 the absence of strong explicit achievement motivation (Rozhkova, 2011). The scores of the participants on the PSE-Q Factor 1 and Factor 2 subscales were normally distributed with no extreme values (Table 11).

The PSE is a projective test where participants are asked to write a story in response to four picture cues. The stories are then coded for implicit achievement motive and a total score calculated. The PSE scores were normally distributed, see Table 11.

Participants answered a series of four prompts in response to four picture cues. The answers were coded for implicit achievement motive and yielded a total score (McClelland, 1992).

Table 11

PSE and PSE-Q Descriptive Statistics

Measure	Item #	n	Mean	SD	SEM	Min.	Max.
PSE-Q	30	113	97.58	11.45	1.08	68	138
Factor 1		113	62.47	9.68	.91	36.00	75.00
Factor 2		113	46.69	7.97	.75	24.00	60.00
PSE	4	113	4.99	5.44	.51	-3.00	19.00

Note. SD (Standard Deviation), SEM (Standard Error of the Mean).

Reliability and Construct Validity of Measures

Cronbach's alpha describes the degree to which responses are consistent across items within a measure and is connected to the intercorrelation between items (Tavakol & Dennick, 2011). Cronbach's alpha does not reveal whether the construct underlying the measure is unidimensional. Cronbach's alpha was calculated for all measures and subscales to assess internal consistency and reliability. Confirmatory Factor Analysis (CFA) was used to assess the number of constructs involved in the measures and subscales. Goodness of fit for the CFA models was determined by root mean square error of approximation (RMSEA), comparative fit index (CFI), and Tucker Lewis-Index (TLI). It is suggested that a RMSEA less than .05 is indicative of a "close fit" and that values up to .1 are representative of reasonable errors of approximation, whereas a value above .1 is considered a poor fit (Asberg, Bowers, Renk, & McKinney, 2008) .

The obtained goodness of fit captures the covariance between the items of a measure. If the fit is poor, it could be that the items are measuring multiple factors or that

some items within a factor are related more to each other. RMSEA is affected by sample size and samples of 200 are recommended (Barrett, 2007). Given the number of participants in this study was 109 for the SACQ and 113 for the other measures the fit indices are presented to enable comparison with the literature. The CFI takes the sample size into account and performs better on smaller samples. The CFI values range from 0.0-1.0 with values closer to 1.0 indicating a good fit (Asberg et al., 2008). The cutoff for a good fit score is equal or greater than .90 (Asberg et al., 2008; Barrett, 2007; Hooper, Coughlan, & Mullen, 2008). The TLI values range from 0.0 to 1.0 and a value of .95 is considered good fit (Hooper et al., 2008).

Student adaptation to college questionnaire (SACQ). Cronbach's alpha for the SACQ and SACQ subscales showed acceptable to excellent internal consistency, as displayed in Table 12. The construct "Adjustment to College" as measured by the SACQ was evaluated by examining shared variance between the subscale latent factors (academic adjustment, social adjustment, personal/emotional adjustment, goal commitment/institutional attachment adjustment) and the SACQ latent factor.

Table 12

SACQ Reliability and Validity Statistics

SACQ (n=109)	Items #	α	RMSEA (90%CI)	CFI/ TLI
SACQ1 Total	67	.93	.099 (.095-.103)	.333 /.312
SACQ4 Total*	65	.92	.086 (.081-.090)	.506/.488
SACQ(-P)**	49	.91	.087 (.081-.093)	.569/.548
Academic	**24**	**.88**	**.097 (.085-.110)**	**.680/.644**
Motivation	6	.72	0 (0-.030)	1.000/1.094
Application	4	.59	.009 (0-.190)	1.000/.999
Performance	9	.76	.095(.056-.132)	.859/.811
Academic Env.	5	.76	.290 (.221-.365)	.619/.238
Social	**20**	**.86**	**.101 (.086.116)**	**.744/.704**
General	7	.84	.118 (.070.168)	.921/.881
Other People	7	.54	.104 (.053.155)	.797/.695
Nostalgia	3	.61	0 (0-0)	1.000/1.000
Social Env.	3	.47	0 (0-0)	1.000/1.000
Personal	**15**	**.85**	**.066 (.039-.089)**	**.889/.867**
Psychological	9	.79	.086 (.045.124)	.896/.862
Physical	6	.68	0 (0-.087)	1.000/1.046
Institutional	**15**	**.84**	**.147 (.129-.165)**	**.588/.519**
General	3	.63	0 (0-0)	1.000/1.000
This College	4	.80	.310 (.204-.430)	.858/.575
Social Connect	**5†**	**.74**	**.027 (0-.138)**	**.996/.992**
CSI	**9††**	**.74**	**.190 (.158-.223)**	**.577/.436**

Note. Four participants excluded due to missing data. α (Cronbach's alpha), RMSEA (Root Mean Square Error of Approximation), comparative fit index (CFI), and Tucker Lewis-Index (TLI); *The 4-Factor Model was significantly better than the 1-Factor Model (Difference X^2 (197) = 925.71, p=.001); ** SACQ(-P)is the total of the academic, social and institutional (goal commitment/institutional attachment) subscales; †social connectedness was created in this study by combining items that assess a sense of social connection (items: 22,42,51,56,57) ††CSI (commitment to stay in college) was created by combining items directly related to staying in vs. dropping out (items: 5,23,34,44,47,57,59, 60, 61).

Correlations between the SACQ and subscale latent factors ranged between .75 and .82, see Table 13; academic adjustment, social adjustment, personal/emotional adjustment and goal commitment/institutional attachment predicted 47% of the variance in the SACQ latent factor. Correlations between the latent academic adjustment factor

and the academic subscale latent factors ranged between .77 and 1.0 (Figure 4); the four latent sub-factors predicted 80% of the variance in the academic latent factor.

Table 13

SACQ Correlation Matrix

	SAQT	Academic	Social	Personal	Institution
SAQT	—	0.82***	0.70***	0.75***	0.82***
Academic		—	0.32***	0.50***	0.54***
Social			—	0.30**	0.78***
Personal				—	0.40***
Institution					—

Note. Pearson Correlations * p < .05, ** p < .01, *** p < .001.

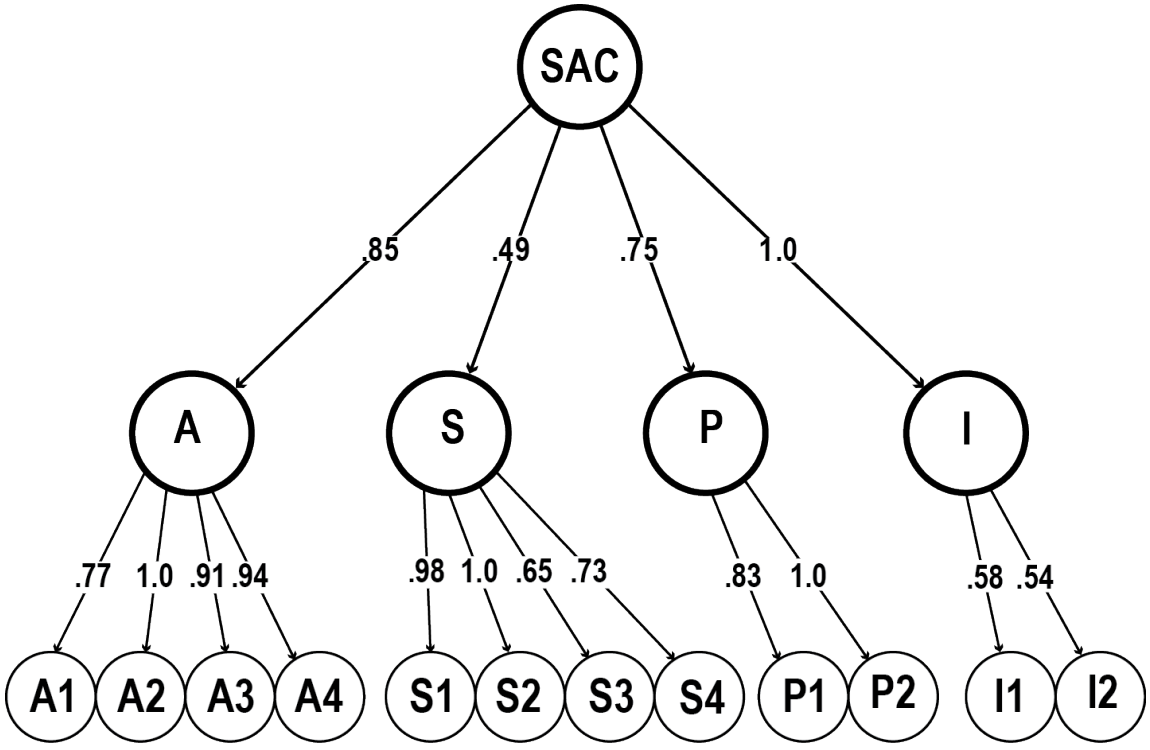

Figure 4. Interrelationships between SACQ total adjustment (SAC) and A (academic adjustment), S (social adjustment), P (personal/emotional adjustment) and I (goal commitment/institutional attachment) scores and their subscales.

Correlations between the latent social adjustment factor and the social adjustment subscale latent factors ranged between .73 and 1.0 (Figure 4); the four latent sub-factors predicted 80% of the variance in the Social latent factor. The Personal factor was nearly entirely predicted by the two latent sub-factors. The Institutional sub-factors predicted 40% of the variance in the latent Institutional factor. Goodness of fit values for total SACQ and SACQ subscales were predominantly good, with a poor fit value for the academic adjustment scale, subscale *academic environment*, social adjustment scale, subscale o*ther people* and the goal commitment/institutional attachment scale, see Table 12. Although the number of participants in this study was small for CFA, the models support the idea there is a latent factor "adjustment to college" that is composed of latent sub-factors academic, social, personal and institutional as reported in the SACQ Manual. There is also support for the latent structure of the subscales as reported in the manual. The SACQ(-P) was created by adding the academic, social and institutional subscales (omitting personal/emotional subscale), to have a measure of adjustment that did not include mental health. The social connectedness and commitment to stay in (CSI) subscales were created by combining items that directly assessed those issues.

Attachment styles questionnaire (ASQ). Cronbach's alpha for ASQ total and subscales had excellent internal consistency, except for the confidence dimension, as illustrated in Table 14. CFA was used to assess the ASQ dimensions. The confidence dimension had an unacceptably low alpha and examination of the CFA model revealed that many of the items were negatively correlated. Histograms of the items indicated that Q1 and Q2 were negatively skewed as many individuals maximally endorsed those items. Q31, Q37 and Q38 were positively skewed. Three items (Q1, Q2, Q33) were dropped

from the confidence dimension (Table 14); the resulting confidence dimension had an acceptable alpha. The discomfort with closeness scale was also improved by reducing the number of items as Tables 14 and 15 demonstrate. Overall the ASQ scale dimensions were reliable and appeared to have a factor structure consistent with the inventory and prior data (Feeney et al., 1994).

Table 14

ASQ Reliability and Validity Statistics

ASQ Subscales	n	Items #	α	RMSEA (95% CI)	CFI/TLI	% Variance predicted by LF
Confidence	113	8	.05	.103 (.061-.144) †	.796/.714	N/A
Confidence-R	113	5*	.61	.116 (.036-.198) †	.881/.762	24%
Anxiety	113	16	.86	.086 (.063-.108)	.849/.822	30%
Preoccupied	113	8	.74	.025 (.000-.086)	.987/.991	28%
NfA	113	8	.78	.147 (.102-.193)	.827/.740	41%
RaS	113	7	.75	.084 (.024-.136)	.925/.887	30%
DwC††	113	10	.76	.110 (.100-.121)	.551/.508	N/A
DwC-R††	113	5**	.78	.087 (.000-.173)	.972/.944	41%

Note. α (Cronbach's alpha), RMSEA (Root Mean Square Error of Approximation), CFI (comparative fit index), and TLI (Tucker Lewis-Index)
*(Q3, Q19, Q31, Q37, Q38) **(Q16, Q23, Q25, Q26, Q34)
†Confidence-R significantly better model fit (Difference X^2 (15) = 31.1, p=.008)
††DwC-R significantly better model fit (Difference X^2 (30) = 161.45, p<.001.

Table 15

Revised ASQ Confidence and Discomfort Dimension Items

Confidence-Revised 5 Questions
3. I feel confident that people will be there for me when I need them.
19. I find it relatively easy to get close to other people.
31. I feel confident about relating to others.
37. If something is bothering me, others are generally aware and concerned.
38. I am confident that other people will like and respect me.

Discomfort with Closeness 5 Questions
16. I find it hard to trust other people.
23. I worry about people getting too close.
25. I have mixed feelings about being close to others.
26. While I want to get close to others, I feel uneasy about it.
34. Other people have their own problems so I don't bother them with mine.

Attachment style dimensions. The attachment style dimensions were significantly correlated as follows: Relationship as secondary was significantly correlated with discomfort with closeness-revised; need for approval was significantly correlated with preoccupation, discomfort with closeness-revised and attachment anxiety; preoccupation was significantly correlated with discomfort with closeness-revised and attachment anxiety; discomfort with closeness-revised was significantly correlated with confidence-revised and attachment anxiety (Table 16).

Table 16

ASQ Correlation Matrix

	TRAS	TNFA	TPRE	TD5	TC5	TANX
TRAS	—	0.16	0.12	0.24*	0.17	0.15
TNFA		—	0.67***	0.44***	0.09	0.90***
TPRE			—	0.46***	0.08	0.92***
TD5				—	0.27**	0.50***
TC5					—	0.10
TANX						—

Pearson Correlations * p < .05, ** p < .01, *** p < .001

Note. TRAS (relationship as secondary), TNFA (need for approval), TPRE (preoccupied), TD5 (discomfort with closeness-revised), TC5 (confidence-revised), TANX (attachment anxiety).

OLS linear regression was used to test what ASQ subscale factors predict Attachment Anxiety; 24.7% (R^2= .25, F1,112= 36.37, t= 6.03, p<.001) of the variance in the Attachment Anxiety score was explained by discomfort with closeness-revised score, displayed in Figure 5.

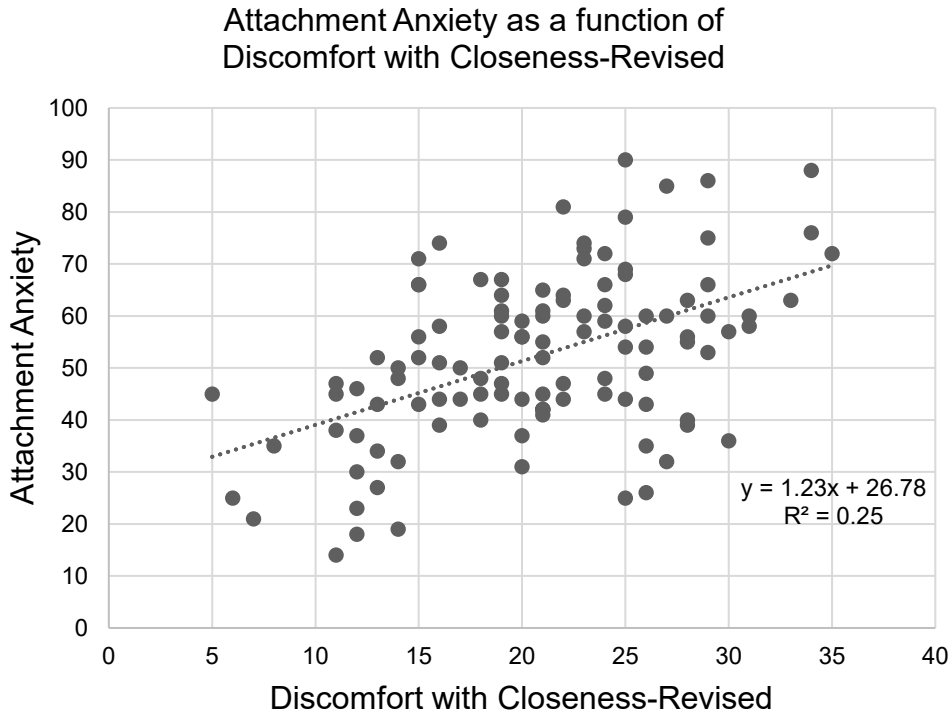

Figure 5. Scatter plot of attachment anxiety explained by discomfort with closeness.

Resource-control strategy inventory Revised (RSCI-R). Cronbach's alpha for the RSCI-R total and respective category scales showed excellent internal consistency as displayed in Table 17. Confirmatory factor analysis supported the proposed dimensions for the RCSI-R. It appears that coercive may contain two latent factors and resource control contain three latent factors (Table 17). A sizable percentage of the item variance was predicted by the respective latent factors, shown in Figure 6.

Table 17
RCSI-R Reliability and Validity Statistics

RCSI Scales (n=113)	Items #	α	RMSEA (95% CI)*	CFI/TLI	% Variance predicted by LF
Coercive	6	.84	.156 (.102-.214)	.946/.910	59%
Coercive 2F*	3,3	.90/.76	.065 (0-.138)	.992/.984	66%
Prosocial	6	.79	.077 (0-.143)	.971/.952	67%
Resource	10	.90	.217 (.190-.245)	.727/.648	56%
Resource 3F**	2,3,5	.87,.87,.86	.103 (.070-.136)	.994/.921	64%

Note. α (Cronbach's alpha), (RMSEA), comparative fit index (CFI), and Tucker Lewis-Index (TLI)* Coercive 2-Factor significantly better model fit (Difference X^2 (1) = 21.89, p<.001); **Resource 3-Factor significantly better model fit (Difference X^2 (3) = 150.61, p<.001).

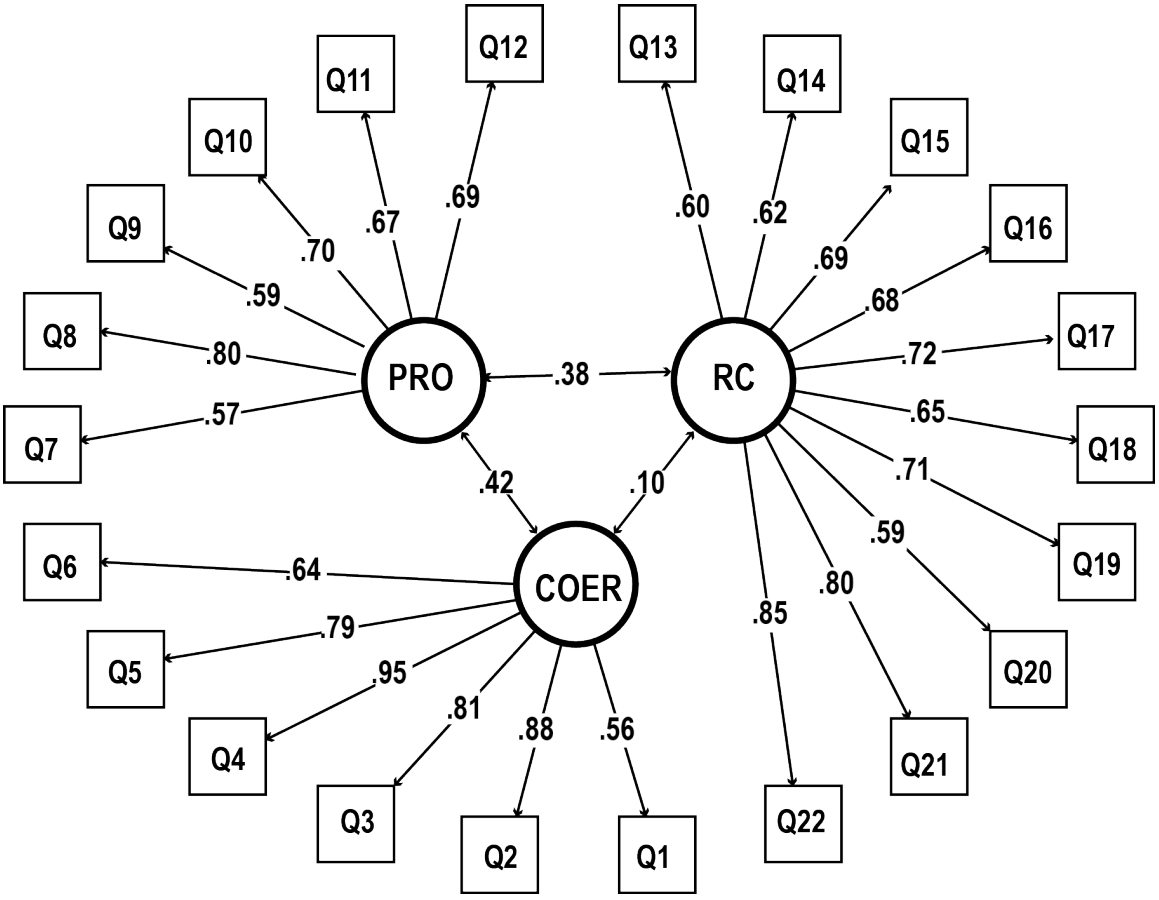

Figure 6. Factor structure of the Resource-Control Inventory Revised.
Note. PRO (prosocial resource control), RC (resource control), COER (coercive control)

The resource control strategies categories were significantly related to each other as displayed in Table 18. Prosocial resource control strategies were significantly correlated with coercive control strategies, see Figure 7 and Table 18. The prosocial control strategy was significantly correlated with coercive control strategy subcategories 1 and 2 (CS1, CS2), and resource control, as well as the resource control subcategories 1, 2, and 3 (RC1, RC2, RC3). Further, the coercive resource control strategy was significantly correlated with resource control subcategories 1 and 2 (RC1, RC2) (Table 18).

Table 18

Correlation Matrix Resource Control Strategies

	Prosocial	Coercive	CS1	CS2	Resource	RC1	RC2	RC3
Prosocial	—	0.44***	0.43***	0.38***	0.34***	0.26**	0.30**	0.30**
Coercive		—	0.94***	0.93***	0.13	0.21*	0.21*	0.01
CS1			—	0.75***	0.15	0.23*	0.21*	0.03
CS2				—	0.10	0.16	0.19*	-0.01
Resource					—	0.80***	0.78***	0.91***
RC1						—	0.53***	0.56***
RC2							—	0.59***
RC3								—

Pearson Correlations * p < .05, ** p < .01, *** p < .001

Note. CS1 (coercive strategy subscale 1), CS2 (coercive strategy subscale 2), resource (resource control), RC1 (resource control subscale 1), RC2 (resource control subscale 2), RC3 (resource control subscale 3).

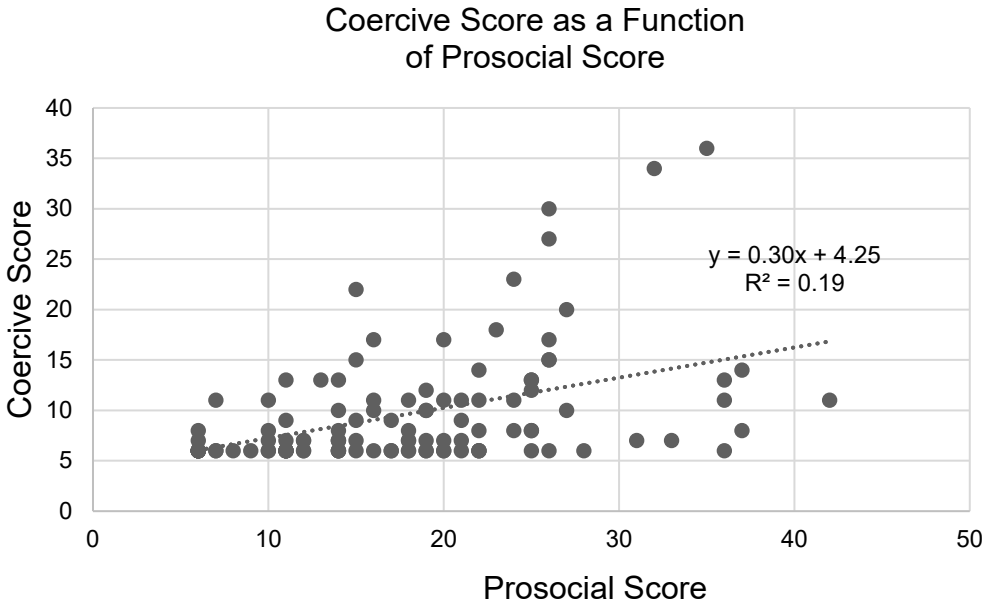

Figure 7. Scatter plot of coercive control strategies as a function of prosocial control strategies.

The coercive control strategy subcategory 1 (CS1) was significantly correlated to coercive control strategy subcategory 2 (CS2), and to resource control subcategories 1 and 2 (RC1, RC2). Coercive control subcategory 2 (CS2) was significantly correlated with Resource Control subcategory 2 (RC2). Resource control was significantly correlated with the resource control subcategories 1, 2, and 3 (RC1, RC2, RC3) and the subcategories were significantly related to each other (Table 18). OLS regression was used to determine which variables best predicted prosocial control. 26.9% (R^2=.27, $F(2,112)= 20.28$, $p<.001$; $t=3.47$, $p<.001$, $t=4.82$, $p<.001$) of variance in prosocial control was explained by resource control and coercive control strategies.

Picture story exercise questionnaire (PSE-Q) and picture story exercise (PSE). Cronbach's alpha for PSE-Q factor 1 and factor 2 had excellent to fair internal consistency shown in Table 19. CFA was unable to confirm the factor structure of the PSE-Q. The factors explained 36% of the PSE-Q item variance. The PSE generated a single implicit achievement motive score for each participant.

Table 19

PSE-Q Reliability and Validity Statistics

PSE-Q (n=113)	Item #	α	RMSEA	CFI/TLI
PSE-Q Total	30	.74	.128 (.119-.136)	.518/.482
PSE-Q Total- (R)	29	.73	.155 (.141-.170)	.650/.604
Factor 1	12	.66	.126 (.100-.153)	.765/.706
Factor 2	17	.91	.155 (.141-.170)	.650/.604

Note. α (Cronbach's alpha), (RMSEA), comparative fit index (CFI), and Tucker Lewis-Index (TLI).

Predictive Analysis: Relationships Between Social Motive Measures

Having established the reliability and validity of the measures and constructs, the analysis progressed to examining the relationships between the measures and prediction of adjustment to college. The predictive analysis was performed to identify the individual and combined effect that attachment styles, resource control strategies and achievement motivation have on adjustment to college.

Attachment styles and resource control strategies. ASQ scale scores and RCSI-R scale scores significantly correlated, see Tables 20 and 21, confidence-revised score was significantly correlated with discomfort with closeness-revised score and resource control. Relationship as secondary was significantly correlated with discomfort

with closeness-revised, prosocial control score, and coercive control score. Attachment anxiety score was significantly correlated with discomfort with closeness-revised and prosocial control strategies, and coercive control strategies. Prosocial control strategies were significantly correlated with resource control and coercive control strategies.

Table 20

Correlation Matrix Attachment Scales and Resource Control Strategies

	TC5	**TRAS**	**TANX**	**TD5**	**Prosocial**	**Resource**	**Coercive**
TC5	—	0.17	0.10	0.27**	0.10	-0.21*	0.08
TRAS		—	0.15	0.24*	0.19*	0.13	0.38***
TANX			—	0.50***	0.28**	-0.04	0.31***
TD5				—	-0.05	-0.06	0.16
Prosocial					—	0.34***	0.44***
Resource						—	0.14
Coercive							—

Pearson Correlations * p < .05, ** p < .01, *** p < .001

Note. TC5 (confidence-revised), TRAS (relationship as secondary), TANX (attachment anxiety), TD5 (discomfort with closeness revised).

Table 21

Correlation Matrix Attachment Scales and Resource Control Strategies

	TRAS	TNFA	TPRE	Coercive	CS1	CS2	Prosocial
TRAS	—	0.16	0.12	0.38***	0.36***	0.34***	0.19*
TNFA		—	0.66***	0.24*	0.16	0.29**	0.16
TPRE			—	0.33***	0.29**	0.33***	0.33***
Coercive				—	0.94***	0.93***	0.44***
CS1					—	0.75***	0.43***
CS2						—	0.38***
Prosocial							—

Pearson Correlations * p < .05, ** p < .01, *** p < .001

Note. TRAS (relationship as secondary), TNFA (need for approval), TPRE (preoccupied), CS1 (coercive subcategory 1), CS2 (coercive subcategory 2).

Prediction of attachment anxiety. Attachment anxiety was predicted by resource control strategy category ($F(4,108)= 3.76$, $p=.007$), see Figure 8. Coercive and

bistrategic controllers had significantly greater attachment anxiety than noncontrollers (p_{tukey}<.02). OLS linear regression was used to examine which variables predicted attachment anxiety. The first model indicated that 24.7% of the variance in attachment anxiety was explained by discomfort with closeness-revised score and the second model indicated that an additional 5.5% of the variance was explained by coercive score, as displayed in Table 22. Coercive score predicted attachment anxiety, see Figure 9, in a manner that was partially mediated by prosocial score. Prosocial score reduced the relationship between attachment anxiety and coercive score, see Figure 10.

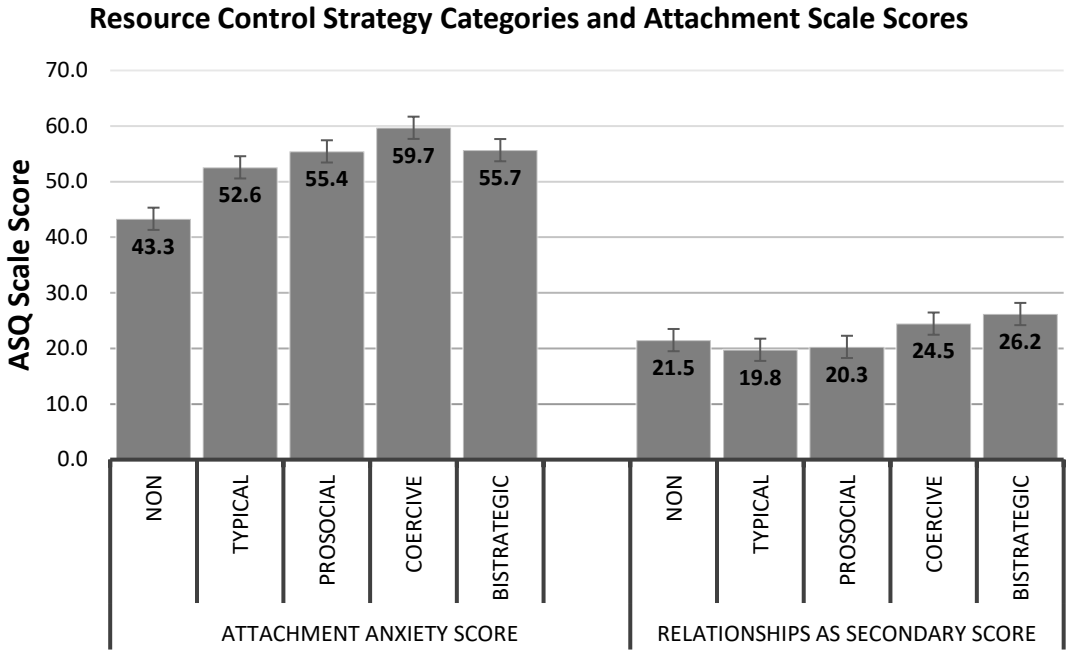

Figure 8. Resource control strategy categories and attachment anxiety and relationship as secondary. Coercive and bistrategic controllers had significantly greater attachment anxiety than noncontrollers (ptukey <.02). Bistrategic controllers had significantly higher RaS scores (ptukey<.03).

Table 22

Linear Regression Attachment Anxiety Dimension

Attachment Anxiety		Attachment Anxiety	
Predictor 1	R^2	Predictor 2	R^2

TD5	24.7% (R^2=.25, F(1,112) = 36.37 t= 6.03, p<.001)	TD5 Coercive	30.2% (R^2=.30, F(2,112)= 23.83 t= 5.68, p<.001 t= 2.96, p=.004)

Note. Discomfort with closeness revised (TD5).

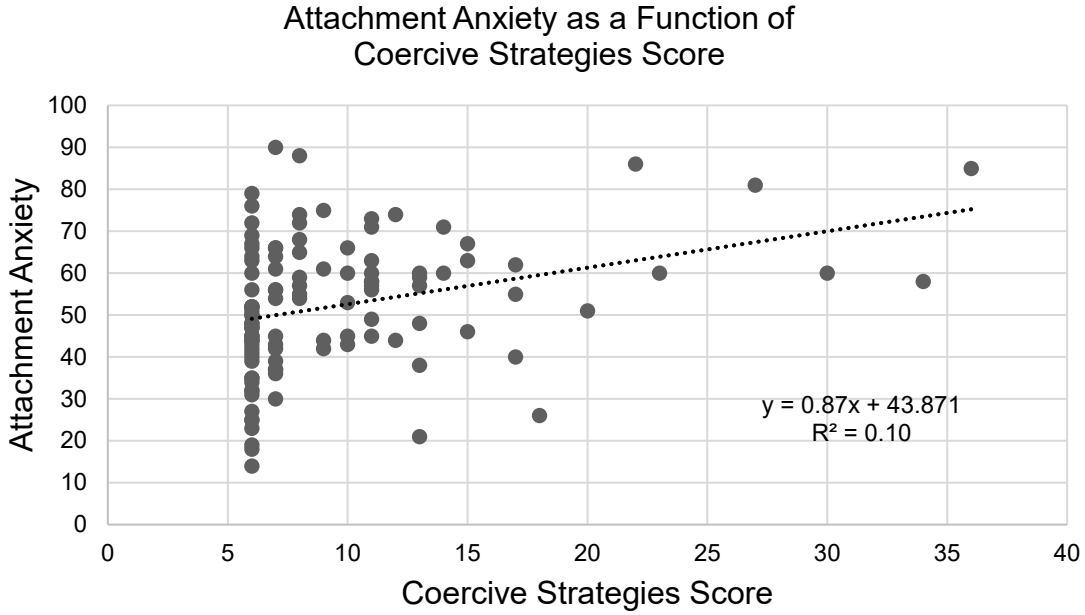

Figure 9. Scatter plot of attachment anxiety as a function of coercive strategies.

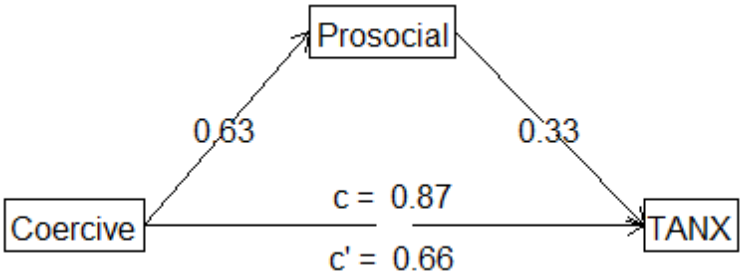

Figure 10. Prediction of attachment anxiety by coercive score. Attachment anxiety was predicted by coercive score in a manner that was moderated by prosocial score. The direct path from coercive to attachment anxiety (.87) was reduced by prosocial (.66).

Prediction of relationships as secondary. Relationships as secondary was predicted by resource control strategy category (F(4, 108)=2.80, p =.029). Bistrategic controllers had significantly higher RaS scores (ptukey<.03). Fourteen percent of the

variance in Relationships as Secondary score was predicted by Coercive score (F(1,112 =18.27, p<.001).

Prediction of attachment preoccupation. Preoccupation was explained partially by RCSI scale scores, as displayed in Table 23. The first model indicated that 10.9% of the variance was explained by coercive factor 2 (CS2) and the second model indicated that 15.7% of the variance was explained by coercive factor 2 (CS2) and prosocial score.

Table 23

Linear Regression Preoccupation Dimension

Preoccupation	
Predictor	R^2
1.CS2	10.9% (R^2=.109, F(1,112)= 13.58 t=3.685, p<.001)
2. CS2 Prosocial	15.7% (R^2=.157, F(2,112) = 10.24 t=2.522, p=.013 t=2.501, p=.014)

Note. CS2 (coercive factor 2).

Prediction of need for approval.

Need for approval score was partially explained by RCSI scale scores, as displayed in Table 24. The first model indicated that 8.4% of the variance in need for approval was explained by coercive factor 2 (CS2) and the second model indicated that 12.7% of the variance was explained by coercive factor 2 (CS2) and resource control factor 3 (RC3).

Table 24

Linear Regression Need for Approval Dimension

Need for Approval	
Predictor	R^2
1.CS2	8.4% (R^2=.084, F(1,112)= 10.14, t=3.18, p=.002)
2.CS2	12.7% (R^2=.127, F(1,112)= 7.99, t=3.22, p=.002, t=-2.33, p=.022)

RC3	

Note. CS2 (coercive control subcategory 2), RC3 (resource control subcategory 3).

Prediction of prosocial and coercive scores. The variance in prosocial score explained by resource control and confidence-revised was 14.4%, as displayed in Table 25. The variance in coercive score predicted by relationships as secondary and preoccupation Scores was 22.3%., as displayed in Table 26.

Table 25

Linear Regression Prosocial Resource Control

Prosocial Score	
Predictor	R^2
1. Resource 2. Confidence-Revised	14.4% R^2=.144, F(2,112)= 9.23 1. t=4.16, p<.001 2. t=1.92, p=.057

Table 26

Linear Regression Coercive and Relationship as Secondary

Coercive Score	
Predictor	R^2
1. Relationships as Secondary 2. Preoccupation	22.3% R^2=.223, F(2,112)= 15.80 1. t=4.05, p<.001 2. t=3.40, p<.001

Prediction of explicit achievement and attachment styles. There was a significant correlation between PSE-Q scores and ASQ scores, see Table 27. Explicit achievement motive (PSE-Q) was significantly correlated with relationship as secondary and confidence-revised. Explicit achievement Factor 1 and 2 (PSE-Q1, PSE-Q2) were significantly correlated with attachment anxiety and discomfort with closeness-revised.

Explicit achievement motive scores (PSE-Q) were partially explained by ASQ scores, as displayed in Table 28. The model indicated that 12.9% of the variance in explicit achievement motive was explained by the confidence-revised and relationship as secondary.

Table 27

Correlation Matrix Explicit Achievement Motive (PSE-Q) and Attachment Styles (ASQ)

	PSEQ	PSEQ1	PSEQ2	TRAS	TANX	TC5	TD5
PSEQ	—	0.30 **	0.29 **	0.22 *	0.14	-0.21 *	0.02
PSEQ1		—	0.99 ***	0.17	0.21 *	-0.06	0.22 *
PSEQ2			—	0.16	0.19 *	-0.05	0.20 *
TRAS				—	0.15	0.17	0.24 *
TANX					—	0.10	0.50 ***
TC5						—	0.28 **
TD5							—

Pearson Correlations * p < .05, ** p < .01, *** p < .001

Note. PSE-Q (Picture Story Exercise Questionnaire), PSE-Q1 (Picture Story Exercise Questionnaire Factor 1), PSE-Q2 (Picture Story Exercise Questionnaire Factor 2), TRAS (relationship as secondary), TANX (attachment anxiety dimension), TC5 (confidence dimension revised), TD5 (discomfort with closeness revised).

Table 28

Linear Regression Explicit Achievement Motive (PSE-Q) and Attachment Styles

PSE-Q	
Predictor 1	R^2
1.C-R	12.9% (R2=.129, F3,108= 5.17)
2. RaS	t=-2.81, p=.006
	t=2.74, p=.007

Note. C-R (confidence dimension revised), RaS (relationship as secondary).

Prediction of explicit achievement and resource control strategies. PSE-Q total scores and RCI scores were significantly correlated, see Table 29. PSE-Q total score significantly correlated with prosocial resource control score, resource control, coercive control score, and coercive control factors (CS1, CS2). Explicit achievement motive factor 1 (PSEQ1) was significantly correlated with coercive control, and coercive factors 1 and 2 (CS1, CS2).

Table 29

Correlation Matrix PSE-Q and Resource Control

	PSEQ	PSEQ1	PSEQ2	Prosocial	Resource	Coercive	CS1	CS2
PSEQ	—	0.30**	0.29**	0.22*	0.28**	0.31***	0.24*	0.35***
PSEQ1		—	0.99***	0.03	0.06	0.36***	0.29**	0.39***
PSEQ2			—	0.01	0.04	0.35***	0.27**	0.39***
Prosocial				—	0.34***	0.44***	0.43***	0.38***
Resource					—	0.13	0.15	0.10
Coercive						—	0.94***	0.93***
CS1							—	0.75***
CS2								—

Pearson Correlations * p < .05, ** p < .01, *** p < .001

Note. PSEQ (Picture Story Exercise Questionnaire), PSEQ1(Picture Story Exercise Questionnaire Factor 1), PSEQ2 (Picture Story Exercise Questionnaire Factor 2), CS1 (coercive control subcategory 1), CS2 (coercive control subcategory 2).

Explicit achievement motive Factor 2 (PSEQ2) was significantly correlated with coercive score, and coercive Factors 1 and 2 (CS1, CS2). Explicit achievement motive scores were explained by RCSI scales, as displayed in Table 30. The model indicated that 15.4% of the variance in total PSE-Q scores was explained by resource control and coercive score. The apparent effect of prosocial control was moderated by coercive control.

Table 30

Linear Regression PSE-Q predicted by RCSI-R

PSEQ	
Predictor 1	R^2
1. Resource 2. Coercive	15.4% R^2=.154, F(3,112)= 6.64 1. t=2.51, p=.013 2. t=2,78, p=.007

Prediction of implicit motive and attachment styles and resource control strategies. There was a significant negative correlation between implicit achievement motive scores (PSE) and ASQ scale scores, see Table 31. Implicit achievement motive (PSE) was significantly correlated with coercive resource control, relationship as secondary, discomfort with closeness-revised, and preoccupation. The variance in implicit achievement motive scores (PSE) was partially explained by attachment style dimensions and resource control strategies, as displayed in Table 32. The first model indicated that 4.9% of the variance in implicit achievement motive was explained by discomfort with closeness-revised. The second model showed that 4.8% of the variance was explained by coercive resource control and 8.3% of the variance was explained by the combined scores of coercive resource control and discomfort with closeness-revised.

Table 31

Correlation Matrix Implicit Achievement Motive, Attachment Styles and Resource Control Strategies

	IACH	Coercive	TRAS	TD5	TPRE
IACH	—	-0.22 *	-0.21 *	-0.22 *	-0.19 *
Coercive		—	0.38 ***	0.16	0.33 ***
TRAS			—	0.24 *	0.12
TD5				—	0.46 ***
TPRE					—

	IACH	Coercive	TRAS	TD5	TPRE

Pearson Correlations * p < .05, ** p < .01, *** p < .001

Note. IACH (implicit achievement motive), TRAS (relationship as secondary), TD5 (discomfort with closeness revised), TPRE (preoccupation).

Table 32

Linear Regression Implicit Achievement Motive

Prediction of Implicit Achievement Motivation					
ASQ	R^2	RCSI-R	R^2	RCI-R & ASQ	R^2
1. DwC	4.9% R^2=.049, F(1,112)= 5.75 t=-2.398, p=.018	1.Coercive	4.8% R^2=.048, F(1,112)= 5.56 t=-2.358, p=.020	1. DwC 2.Coercive	8.3% (R^2=.083, F2,212= 5.01) t=-2.071, p=.041 t=-2.026, p=.045

Note. DwC (discomfort with closeness revised).

Predictive Analysis: Social Motives and Adjustment to College

Prediction of the SACQ total score. The SACQ total score was significantly negatively correlated with all ASQ scales, as displayed in Table 33. The strongest correlation was between attachment anxiety and SACQ total, see Figure 11. The need for approval component of attachment anxiety correlated more strongly with SACQ total than did preoccupation. Coercive and prosocial scores were significantly negatively correlated with SACQ total score, see Table 34. OLS regression was used to model the predictors of SACQ total. The final model explained 25% of the variance and included both attachment anxiety score (21%) and coercive score (F(2, 108)= 17.44, p<.001), see Figures 11 and 12.

Table 33

Correlation Matrix Total SACQ Score and ASQ Scale Scores

	SACQT	TRAS	TNFA	TPRE	TANX	TD5	TC5
SACQT	—	-0.26**	-0.46***	-0.38***	-0.46***	-0.35***	-0.36***
TRAS		—	0.16	0.12	0.15	0.24*	0.17
TNFA			—	0.66***	0.90***	0.44***	0.10
TPRE				—	0.93***	0.46***	0.08
TANX					—	0.5***	0.10
TD5						—	0.28**
TC5							—

Pearson Correlations * p < .05, ** p < .01, *** p < .001

Note. TRAS (relationship as secondary), TNFA (need for approval),TPRE (preoccupation), TANX (attachment anxiety), TD5 (discomfort with closeness revised), TC5 (confidence revised).

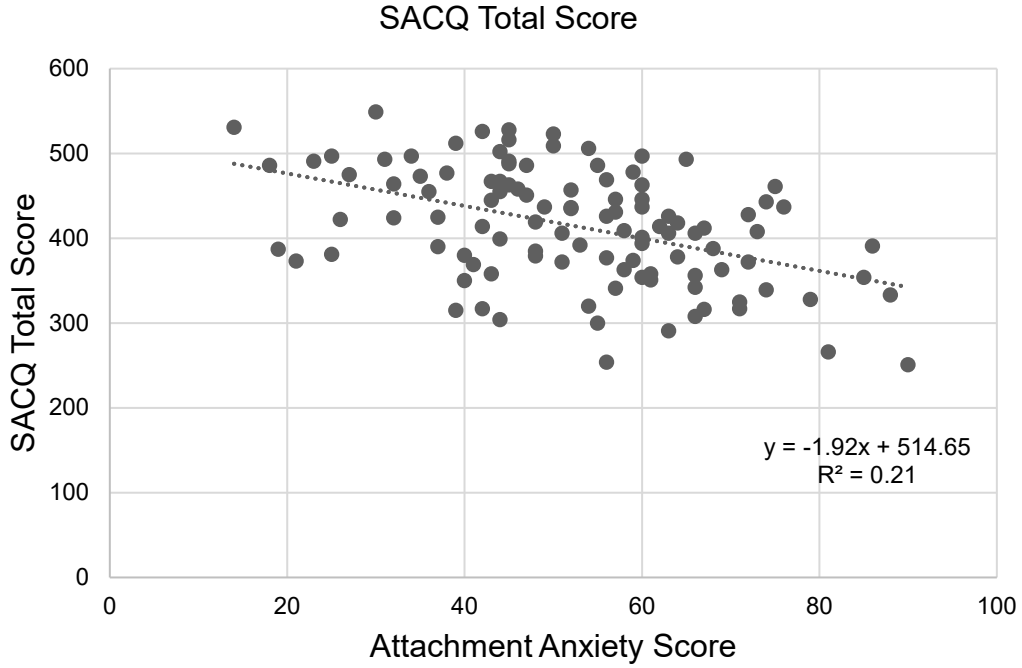

Figure 11. Scatter plot of total SACQ Score as a function of attachment anxiety score.
Table 34

Correlation Matrix Total SACQ Score and RCSI-R Scale Scores

	SACQT	Coercive	Prosocial	Resource
SACQT	—	-0.33***	-0.26**	0.12
Coercive		—	0.45***	0.14
Prosocial			—	0.34***
Resource				—

Note. Pearson Correlations * p < .05, ** p < .01, *** p < .001.

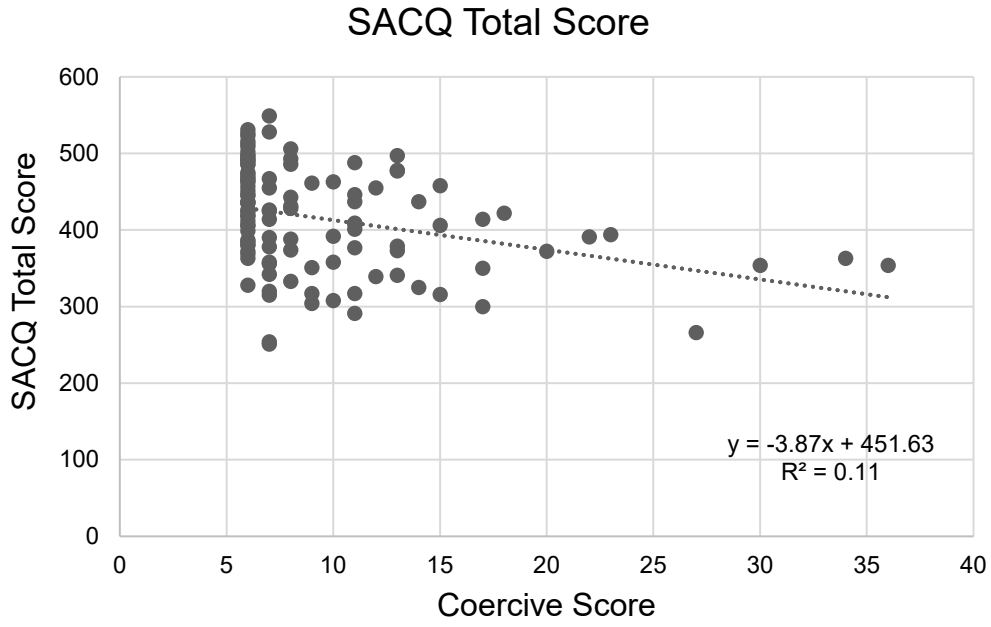

Figure 12. Scatter plot of total SACQ Score as a Function of Coercive Score

Prediction of the SACQ total without the personal/emotional subscale. Prior literature indicates that the personal/emotional subscale of the SACQ is a marker for mental health. To determine if the impact of social motives on SACQ total was due to mental health, the personal/emotional subscale was omitted from the SACQ total. The subsequent SACQ(-P) was composed only of the academic, social and goal commitment/institutional attachment subscales. The SACQ(-P) total score correlated significantly ($r=0.30$, $p<.001$) with the personal/emotional total score, verifying a strong impact of mental health on adjustment to college, see Figure 13.

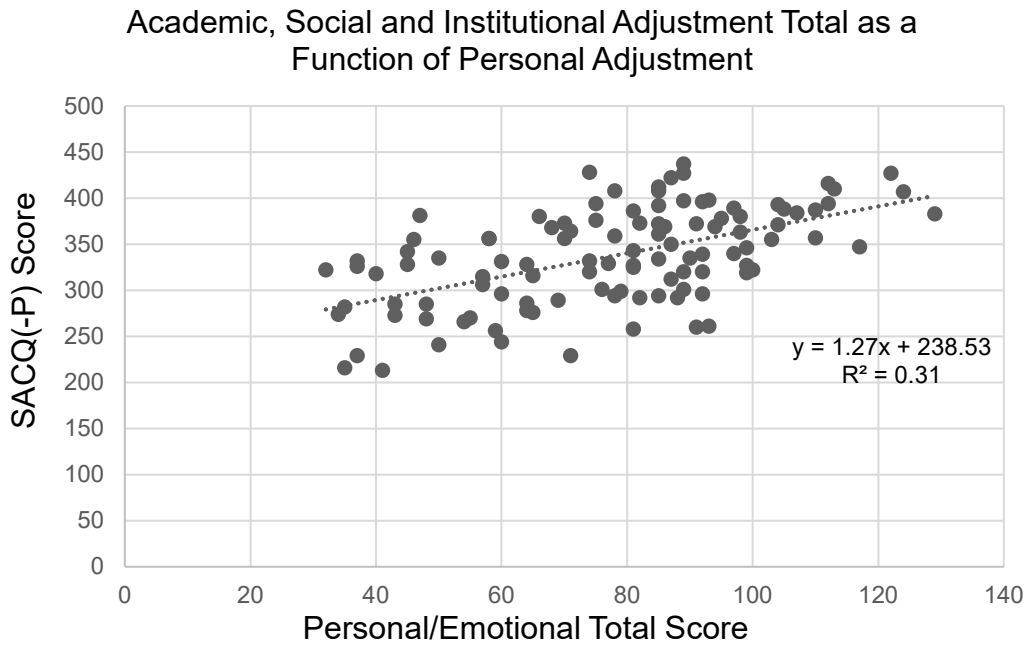

Figure 13. Scatter plot of SACQ(-P) as a function of personal/emotional score.

Resource control category predicted both SACQ(-P) ($F(4, 104)=3.42$, $p=.01$) and SACQ total ($F(4, 104)=3.27$, $p=.014$) indicating that resource control strategies impact adjustment to college in addition to effects on mental health, see Figure 14. Bistrategic controllers had the lowest adjustment to college scores (ptukey<.01). Attachment anxiety and personal/emotional adjustment together predicted 36% of the variance in SACQ(-P). The impact of coercive was moderated by attachment anxiety such that coercive did not add to prediction in the final model. Noncontrollers had the highest adjustment to college scores (SACQ total $F(1,107)=7.513$, $p<.007$; SACQ(-P) total $F(1,107)=8.95$, $p<.003$), see Figure 15. Together, need for approval, SACQ personal/emotional and confidence-revised predicted 42% of the variance in SACQ(-P) score ($F(3,108)=25.53$, $p<.001$). The impact of social motives on mental health is further discussed.

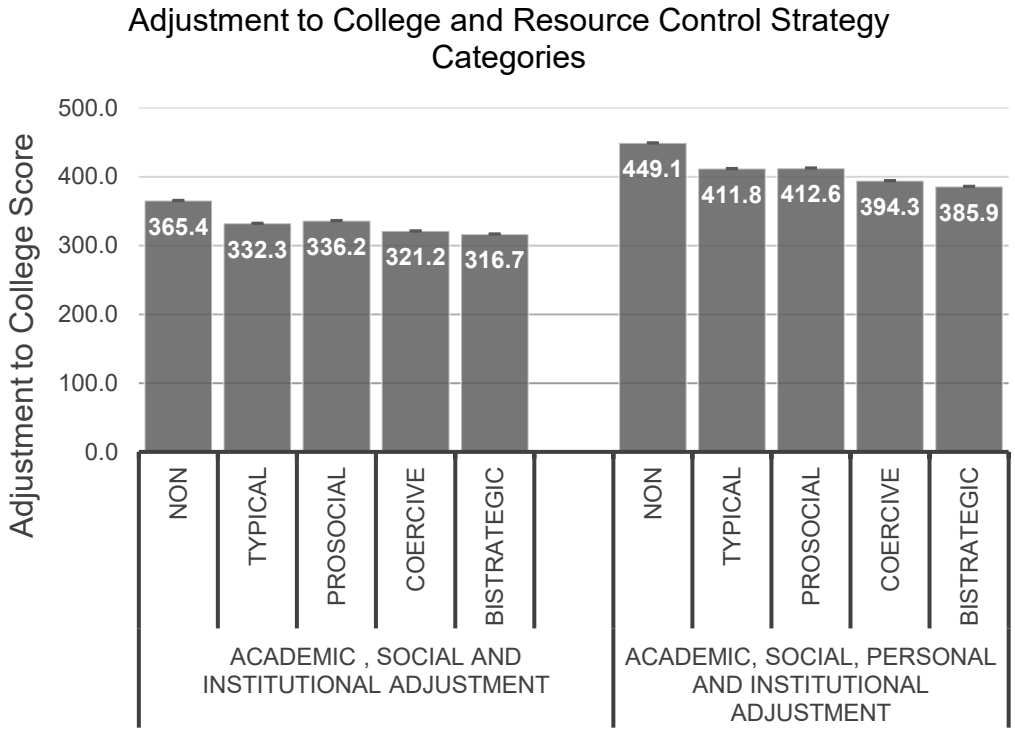

Figure 14. SACQ(-P) and SACQ Total and Resource Control Category Placement. Bi-strategic controllers had the lowest adjustment to college scores (ptukey<.01).

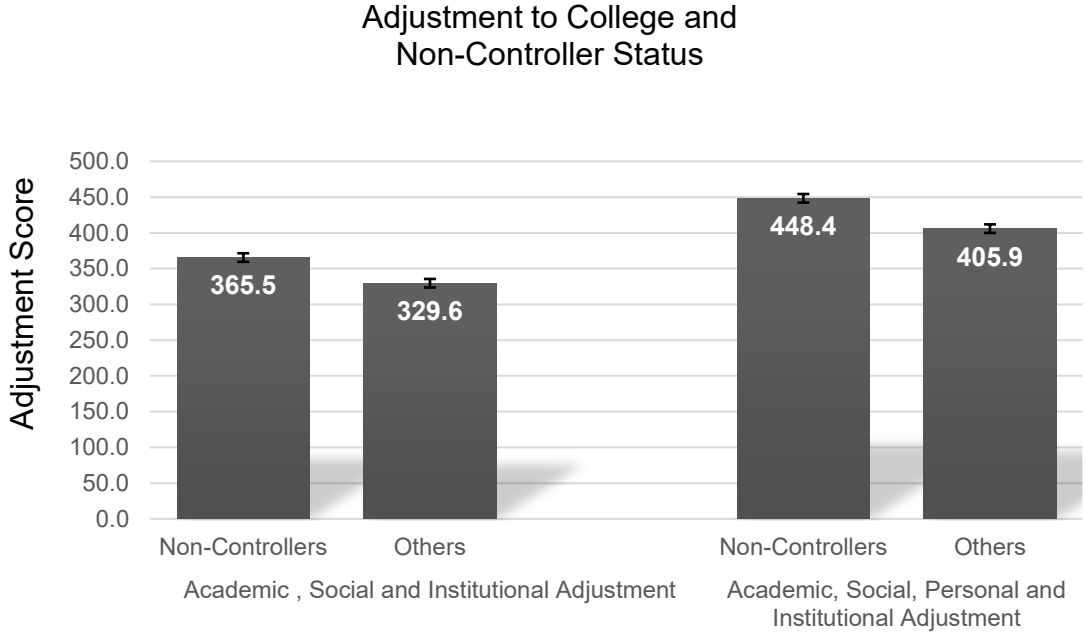

Figure 15. SACQT-P, SACQ total and non-controller category status.

Prediction of academic adjustment. The academic total adjustment and academic subscales were correlated with all ASQ scales except confidence-revised, as displayed in Table 35. Need for approval (one of two components of attachment anxiety) had the strongest impact on all academic adjustment scales, see Figure 16. Need for approval and relationships as secondary predicted 17.9% of the variance in academic adjustment total score ($F(2,108)= 11.55$, $p<.001$) and 13 % of the variance in academic motivation score ($F(2,108)= 7,63$, $p<.001$). Academic application score was predicted only by discomfort with closeness-revised ($R^2=.15$, $F(1,108)= 18.90$ $p<.001$). Academic performance score was predicted only by need for approval ($R^2=.12$, $F(1,108) = 14.48$, $p<.001$). Academic environment satisfaction was predicted only by need for approval ($R^2=.082$, $F(1,108)=9.51$, $p=.003$). The impact of need for approval on total academic adjustment score remained significant when the SACQ personal/emotional subscale was entered into the model; together these explained 30% of the variance in academic adjustment ($F(2,108)=22.65$, $p<.001$).

Table 35

Correlation Matrix SACQ Academic Scales and ASQ Scales

	TA	A1	A2	A3	A4	TRAS	TNFA	TPRE	TANX	TD5
TA	—	0.78***	0.81***	0.88***	0.78***	-0.25**	-0.37***	-0.26**	-0.34**	-0.26*
A1		—	0.56***	0.49***	0.55***	-0.28**	-0.26**	-0.17	-0.23	-0.21
A2			—	0.65***	0.55***	-0.22*	-0.30**	-0.23*	-0.29*	-0.39**
A3				—	0.54***	-0.20*	-0.35***	-0.27**	-0.33**	-0.22
A4					—	-0.14	-0.29**	-0.15	-0.23	-0.07
TRAS						—	0.16	0.12	0.15	0.22
TNFA							—	0.66***	0.90**	0.44**
TPRE								—	0.93**	0.42**
TANX									—	0.50**
TD5										—

Pearson Correlations * p < .05, ** p < .01, *** p < .001

Note. A4 (academic subscale 4), TA (total academic adjustment), A1 (academic adjustment subcategory 1), A2 (academic adjustment subcategory 2), A3(academic adjustment subcategory 3), TRAS (relationship as secondary), TNFA (need for approval), TPRE (preoccupation), TANX (attachment anxiety) TD5 (discomfort with closeness-revised).

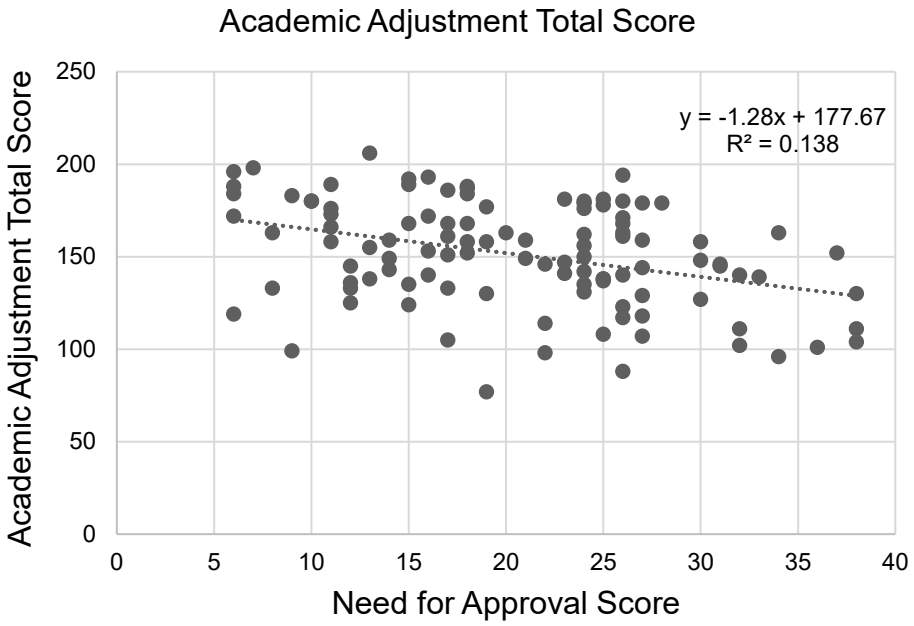

Figure 16. Scatter plot of SACQ academic scale score as a function of need for approval.

The academic total adjustment and academic subscales, except academic environment satisfaction were negatively correlated with coercive score, as displayed in Table 36. Prosocial score correlated negatively with academic adjustment total, but not with any of the subscales. Resource control strategy categories did not predict academic adjustment ($F(4, 104)= 1.46$, $p=.220$). Resource control did not correlate with academic adjustment. Coercive score predicted between 6% and 8% of the variance in academic adjustment. The impact of coercive on academic scores was partly moderated by the ASQ scale scores. Academic total, academic motivation and academic performance was not predicted by coercive in the final models that included the ASQ scales. Academic

application was predicted by both discomfort with closeness-revised and coercive score (R^2=.190, F(2,108) = 12.45, p<.001).

Table 36

Correlation Matrix SACQ Academic Scales and RCSI-R Scale Scores

	TA	A1	A2	A3	A4	Coercive	Prosocial
TA	—	0.78***	0.81***	0.88***	0.78***	-0.28**	-0.20*
A1		—	0.56***	0.49***	0.55***	-0.26**	-0.11
A2			—	0.65***	0.55***	-0.26**	-0.15
A3				—	0.54***	-0.24*	-0.22*
A4					—	-0.14	-0.12
Coercive						—	0.44***
Prosocial							—

Pearson Correlations * p < .05, ** p < .01, *** p < .001

Note. A4 (academic subscale 4), TA (total academic adjustment), A1 (academic adjustment subcategory 1), A2 (academic adjustment subcategory 2), A3(academic adjustment subcategory 3).

Prediction of social adjustment. The anxiety scale of the ASQ is the sum of need for approval and preoccupation scores. Need for approval correlated more strongly than preoccupation with social relationships total, general social adjustment (S1), other people (S2), and social environment (S4), as displayed in Table 37. As would be expected preoccupation was most strongly related to nostalgia (yearning for home) (S3), see Figure 17. Discomfort with closeness was also most strongly related to nostalgia (yearning for home) (S3). confidence-revised was negatively related to general social adjustment (S1), other people (S2) and to nostalgia (S3) (yearning for home). That finding was unexpected (see discussion). Relationships as secondary did not predict social adjustment. Social connection (S2b) was predicted negatively by attachment

anxiety and confidence; together these explained 33% of the variance (F(2,108)=26.55, p<.001), see Figure 18.

Table 37

Correlation Matrix Social Adjustment and ASQ Scale Scores

	TS	S1	S2	S3	S4	S2b	TNFA	TPRE	TANX
TS	—	0.86 ***	0.87 ***	0.61 ***	0.64 ***	0.72 ***	-0.39 ***	-0.29 **	-0.365 ***
S1		—	0.71 ***	0.35 ***	0.35 ***	0.46 ***	-0.32 ***	-0.19	-0.27 **
S2			—	0.42 ***	0.43 ***	0.59 ***	-0.23 *	-0.17	-0.21 *
S3				—	0.29 **	0.94 ***	-0.41 ***	-0.45 ***	-0.47 ***
S4					—	0.34 ***	-0.25 **	-0.16	-0.22 *
S2b						—	-0.43 ***	-0.47 ***	-0.50 ***
TNFA							—	0.66 ***	0.90 ***
TPRE								—	0.93 ***
TANX									—

Pearson Correlations * p < .05, ** p < .01, *** p < .001

Note. TS (total social adjustment), S1 (social adjustment subcategory 1), S2 (social adjustment subcategory 2), S3(academic adjustment subcategory 3), S4 (social adjustment subscale 4),TNFA (need for approval), TPRE (preoccupation), TANX (attachment anxiety).

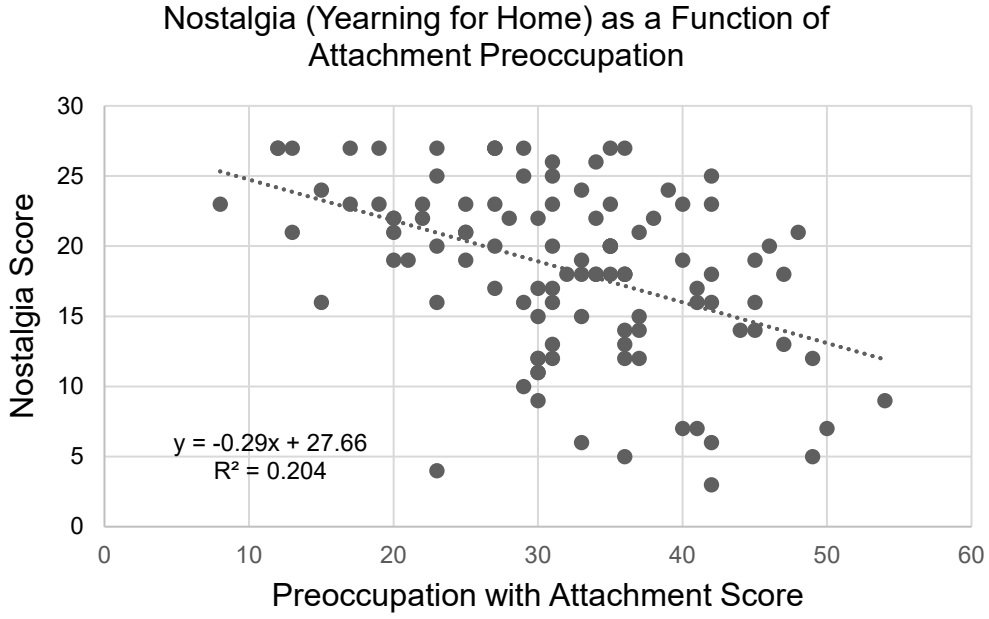

Figure 17. Scatter plot of SACQ social adjustment scale (Nostalgia) as a function of ASQ preoccupation.

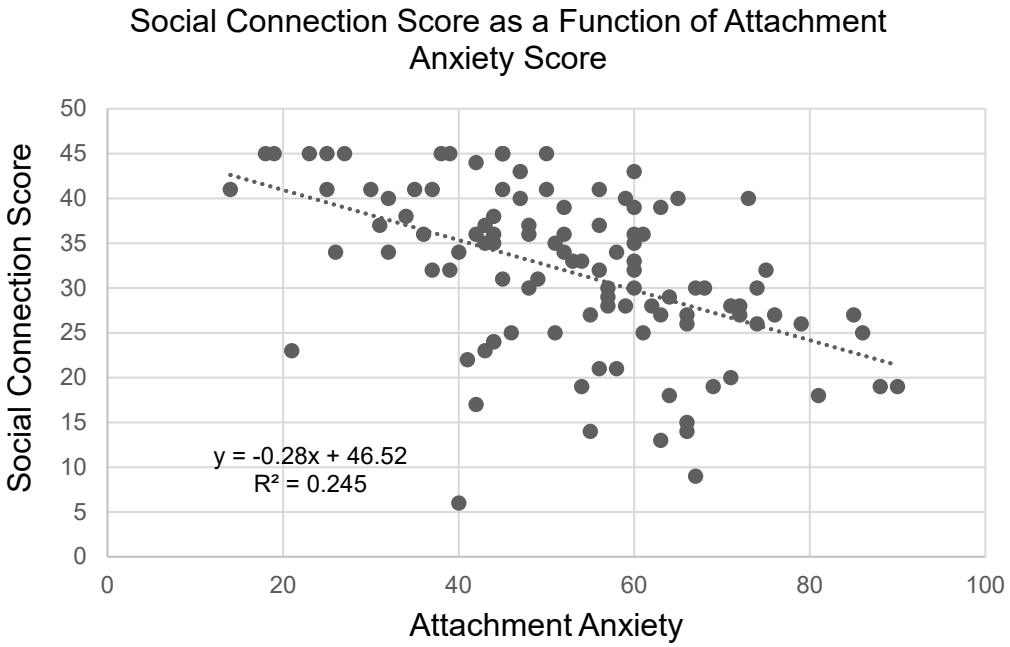

Figure 18. Scatter plot of SACQ social adjustment scale (social connection) as a function of ASQ attachment anxiety score.

The RCSI-R scales impacted social adjustment and the social adjustment subscales, see Tables 38, 39, and 40. Prosocial score was significantly negative correlated with social adjustment total score. However, prosocial was also correlated with coercive score. Hence the relationship between social adjustment total and the prosocial score was entirely mediated by the coercive score (direct effect of prosocial score on social total ($t = -2.05$, $p= 0.042$), direct effect of prosocial score on social removing the coercive score ($t = -0.89$, $p= 0.38$)). The prosocial score significantly negatively predicted other people (S2). As predicted, non-controllers had the highest social adjustment, and both coercive groups the lowest social adjustment, though resource control strategy categories did not predict social adjustment total ($F(4, 104)= 1.46$, $p=.220$, see Figure 19.

Table 38

Correlation Matrix Social Adjustment and RCSI-R Prosocial Score

	TS	S1	S2	S3	S4	S2b	Prosocial
TS	—	0.86***	0.87***	0.61***	0.64***	0.72***	-0.19*
S1		—	0.71***	0.35***	0.35***	0.46***	-0.05
S2			—	0.42***	0.43***	0.59***	-0.20*
S3				—	0.29**	0.94***	-0.18
S4					—	0.34***	-0.21*
S2b						—	-0.27**
Prosocial							—

Pearson Correlation * p < .05, ** p < .01, *** p < .001

Note. TS (total social adjustment), S1 (social adjustment subcategory 1), S2 (social adjustment subcategory 2), S3(academic adjustment subcategory 3), S4 (social adjustment subscale 4), TNFA (need for approval), TPRE (preoccupation), TANX (attachment anxiety), S2b (social adjustment subcategory revised).

Table 39

Correlation Matrix Social Adjustment and RCSI-R Coercive Score

	TS	S1	S2	S3	S4	S2b	Coercive	CS1	CS2
TS	—	0.86 ***	0.87 ***	0.61 ***	0.64 ***	0.72 ***	-0.27 **	-0.30 **	-0.20 *
S1		—	0.71 ***	0.35 ***	0.35 ***	0.46 ***	-0.23 *	-0.23 *	-0.20 *
S2			—	0.42 ***	0.43 ***	0.59 ***	-0.20 *	-0.25 **	-0.11
S3				—	0.29 **	0.94 ***	-0.27 **	-0.28 **	-0.23 *
S4					—	0.34 ***	-0.13	-0.18	-0.06
S2b						—	-0.30 **	-0.30 **	-0.25 **
C							—	0.94 ***	0.93 ***
CS1								—	0.75 ***
CS2									—

Pearson Correlations * p < .05, ** p < .01, *** p < .001

Note. TS (total social adjustment), S1 (social adjustment subcategory 1), S2 (social adjustment subcategory 2), S3(academic adjustment subcategory 3), S4 (social adjustment subscale 4), TNFA (need for approval), TPRE (preoccupation), TANX (attachment anxiety), S2b (social adjustment subcategory revised), C (coercive), CS1 (coercive resource control subcategory 1), CS2 (coercive resource control subcategory 2).

Table 40

Correlation Matrix Social Adjustment and Resource Control Score

	TS	S1	S2	S3	S4	S2b	R	RC1	RC2	RC3
TS	—	0.864 ***	0.873 ***	0.609 ***	0.644 ***	0.718 ***	0.199 *	0.193 *	0.064	0.202 *
S1		—	0.711 ***	0.347 ***	0.354 ***	0.459 ***	0.376 ***	0.337 ***	0.206 *	0.360 ***
S2			—	0.418 ***	0.432 ***	0.592 ***	0.097	0.127	-0.028	0.104
S3				—	0.287 **	0.935 ***	0.034	-0.020	-0.006	0.076
S4					—	0.342 ***	-0.031	0.020	-0.060	-0.040
S2b						—	-0.002	-0.024	-0.080	0.047
R							—	0.805 ***	0.777 ***	0.913 ***
RC1								—	0.533 ***	0.555 ***
RC2									—	0.592 ***
RC3										—

Pearson Correlation * p < .05, ** p < .01, *** p < .001

Note. TS (total social adjustment), S1 (social adjustment subcategory 1), S2 (social adjustment subcategory 2), S3(academic adjustment subcategory 3), S4 (social adjustment subscale 4), S2b (social adjustment subcategory revised), R (resource control), RC1 (resource control subcategory 1), RC2 (resource control subcategory 2).

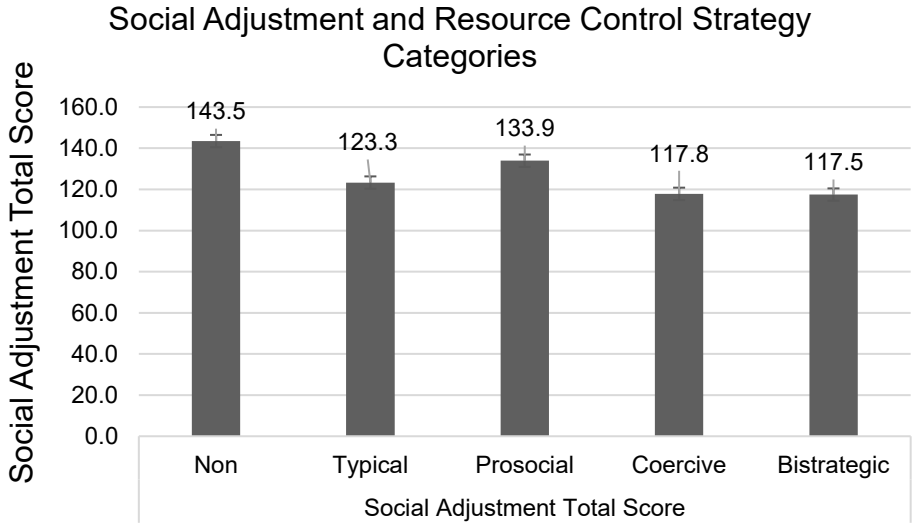

Figure 19. Social adjustment and resource control strategy categories.

Social adjustment was negatively predicted by coercive score; overall the impact of CS1 was greater than that of CS2, as displayed in Table 39. CS1 items are those that

assess bullying and intimidation as coercive strategies. Coercive score was not correlated with satisfaction with social aspects of the college environment (S4). Coercive score negatively predicted social connection (S2b). Resource Control score positively predicted social adjustment total and general adjustment (S1). Resource control explained 14% of the variance in general social adjustment, see Figure 20.

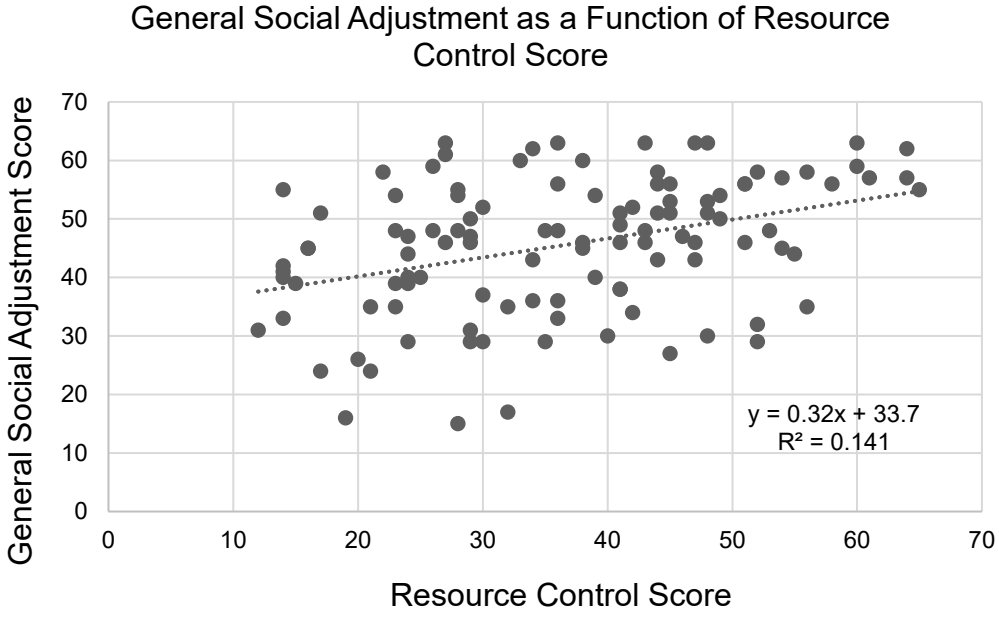

Figure 20. Scatter plot of social adjustment and resource control.

ASQ and RCSI-R scales together predicted 28.5% of social adjustment total, as displayed in Table 41; 26.2% of the variance in general social adjustment (Table 42); 24% of the variance in nostalgia (Table 43); and 8% of the variance in other people (Table 45);. ASQ scales predicted more of the variance in social total, nostalgia and social connection and RCSI-R scales predicted more of the variance in general, see Table 43 and 44. ASQ and RCSI-R scales predicted other people equally, as displayed in Table 45.

Table 41

Linear Regression Social Adjustment and Attachment Dimension and Resource Control Strategies

Social Total					
ASQ	R^2	RCSI-R	R^2	RCI-R & ASQ	R^2
1. NfA 2.C-R	26% R^2=.260, F(2,108)= 18.57 1. t=-4.201, p<.001 2. t=-3.99, p<.001	1. Coercive 2. Resource	12.9% R^2=.129, F(2,108)=7.86 1. t=-3.30, p=.001 2. t= 2.64 p=.009	1.Coercive 2.NfA 4.C-R	28.5% R^2=.285, F(3,108)=13.98) 1. t=-1.95, p=.05 2. t=-3.70, p=.001 3. t=-3.91, p<.001

Note. NfA (need for approval) C-R (confidence dimension revised).

Table 42

Linear Regression Social Adjustment (General) and Attachment Dimension and Resource Control Strategies

Social Adjustment Subscale General					
ASQ	R^2	RCSI-R	R^2	RCI-R & ASQ	R^2
1.NfA	10.5% R^2.105, F(1,108)=6.246 t=-2.94, p=.004	1.Coercive 2.Resource	22.4% R2=.224, F(2,108)=15.28 1. t=-3.36, p=.001 2. t=4.82, p<.001	1.Resource 2.Coercive 3.NfA	26.2% R^2=.262, F(3,108)=12.41 1. t=4.34, p<.001 2. t=2.69, p=.008 3. t=-2.33, p=.022

Note. NfA (need for approval).

Table 43

Linear Regression Social Adjustment (Nostalgia) and Attachment Dimension and Resource Control Strategies

Social Adjustment Subscale Nostalgia					
ASQ	R^2	RCSI-R	R^2	RCI-R & ASQ	R^2
1.TANX	22.2% (R^2=.222, F(1,108)= 30.58, p<.001	1. Coercive	7.4% (R^2=.074, F(1,108)= 8.54, p=.004	1.Coercive 2.TANX	24.0% R^2=.240, F(2,108)= 16.76 1. t=-1.58, p=.116 1. t=-4.811, p<.001)

Note. TANX (attachment anxiety).

Table 44

Linear Regression Social Adjustment (Social Connection) and Attachment Dimension and Resource Control Strategies

Social Adjustment Subscale Social Connection					
ASQ	R^2	RCSI-R	R^2	RCSI-R & ASQ	R^2
1. Anxiety 2. RaS	27.3% R^2=.273, F(2,108)= 19.90 1. t=-5.62, p<.001 2. t=-2.033, p=.045	Coercive	8.7% (R^2=.870, F(1,108)=10.16 p=.003	Coercive did not contribute to the final model.	

Note. RaS (relationship as secondary).

Table 45

Linear Regression Social Adjustment (Other People) and Attachment Dimension and Resource Control Strategies

Social Adjustment Scale Other People					
ASQ	R^2	RCSI-R	R^2	RCI-R & ASQ	R^2
1. NfA	5.3% (R^2=.053, F(1,108)= 6.01, p=.016	1.Prosocial	4.1% R^2=.041, F(1,108)= 4.58, p=.035 t=-2.140, p=.035	2. Prosocial 2. NfA	8.0% R^2=.080, F(2,108)= 4.625, p=.016 1. t=-1.77, p=.080 2. t=-2.13, p=.036

Note. NfA (need for approval).

Prediction of personal/emotional adjustment. Personal/emotional adjustment, and the personal/emotional adjustment subscales were negatively correlated with all the ASQ scales, see Table 46 and 47. Attachment anxiety, relationships as secondary and discomfort with closeness-revised predicted 25% of the variance in personal/emotional adjustment score. Coercive score and prosocial score also correlated negatively with personal/emotional adjustment and psychological adjustment (P1); these did not correlate with physical adjustment (P2). Resource control did not predict personal/emotional adjustment, see Table 48. ASQ anxiety, relationships as secondary and confidence-revised predicted 25% of the variance in personal/emotional adjustment.

Table 46

Personal Adjustment and ASQ Scales

	TP	TRAS	TNFA	TPRE	TANX	TD5	TC5
TP	—	-0.27**	-0.31**	-0.36***	-0.37***	-0.29**	-0.31***
TRAS		—	0.16	0.12	0.15	0.24*	0.17
TNFA			—	0.66***	0.90***	0.44***	0.10
TPRE				—	0.93***	0.46***	0.08
TANX					—	0.50***	0.10
TD5						—	0.28**
TC5							—

Pearson Correlations * p < .05, ** p < .01, *** p < .001

Note: TP (personal/emotional adjustment) TNFA (need for approval), TPRE (preoccupation), TANX (attachment anxiety), TD5 (discomfort with closeness-revised), TC5 (Confidence Revised)

Table 47

Personal Subscale Scores and ASQ Scales

	P1	P2	TRAS	TNFA	TPRE	TANX	TC5	TD5
P1	—	0.66***	-0.23*	-0.26**	-0.38***	-0.36***	-0.26**	-0.28**
P2		—	-0.28**	-0.32***	-0.25*	-0.30**	-0.34***	-0.24*
TRAS			—	0.16	0.12	0.15	0.17	0.24*
TNFA				—	0.66***	0.90***	0.10	0.44***
TPRE					—	0.93***	0.08	0.46***
TANX						—	0.10	0.50***
TC5							—	0.28**
TD5								—

Pearson Correlations * p < .05, ** p < .01, *** p < .001

Note: P1 (personal/emotional adjustment subcategory 1), P2 (personal/emotional adjustment subcategory 2), TNFA (need for approval), TPRE (preoccupation), TANX (attachment anxiety), TD5 (discomfort with closeness-revised), TC5 (confidence-revised)

Table 48

Personal/Emotional Adjustment and RCSI-R Scale Scores

	TP	P1	P2	Coercive	Prosocial	Resource
TP	—	0.945***	0.872***	-0.246*	-0.239*	0.051
P1		—	0.663***	-0.284**	-0.291**	0.015
P2			—	-0.136	-0.111	0.095
Coercive				—	0.435***	0.135
Prosocial					—	0.339***
Resource						—

Pearson Correlations * p < .05, ** p < .01, *** p < .001

Note. TP (personal/emotional adjustment), P1 (personal/emotional adjustment subcategory 1), P2 (personal/emotional adjustment subcategory 2).

The coercive score predicted 6% of the variance but did not contribute to the final combined model, as displayed in Table 49. Personal/emotional adjustment (psychological) was predicted by resource control strategy category and gender and there was an interaction between those two predictors, see Table 50. Women had lower scores on psychological adjustment. Personal/emotional adjustment (psychological) was predicted by both ASQ scale scores and RCSI-R scale scores. About 21% of the variance in personal/emotional adjustment (psychological) was predicted by social motives, as displayed in Table 51.

Table 49

Linear Regression Personal/Emotional Adjustment and Attachment Dimension and Resource Control Strategies

Prediction of Personal Adjustment Total Score					
ASQ	R^2	RCSI-R	R^2	RCI-R & ASQ	R^2
1. Anxiety 2. RaS 3. C-R	24.7 % F(3,108)= 11.49, p< .001 1. t=3.67, p<.001 2. t=2.20, p=.03 3. t=2.97, p<.004	1. Coercive	6.02% F(1,108) = 6.87, p<.01)	RCSI scale scores did not contribute to final model.	

Note. RaS (relationship as secondary) C-R (confidence dimension revised)

Table 50

Covariance between Resource Control Strategy Category and Gender in the Prediction of Personal/Emotional Adjustment (psychological)

Cases	Sum of Squares	df	Mean Square	F	p	η^2
RC	1983.9	4	496.0	2.50	0.048	0.083
Gender	1504.7	1	1504.7	7.57	0.007	0.063
RC ✻Gender	675.3	4	168.8	0.85	0.497	0.028
Residual	19680.3	99	198.8			

Note. RC (resource control strategy)
ANCOVA – psychological adjustment; Type I Sum of Squares

Table 51

Linear Regression Personal/Emotional Adjustment (Psychological) and Attachment Dimension and Resource Control Strategies

Prediction of Psychological Adjustment					
ASQ	R^2	RCSI-R	R^2	RCI-R & ASQ	R^2
1. Anxiety 2. C-R	17.6% R^2=.176, F(2,108)= 11.35 1. t=-3.778, p<.001 2. t=-2.528, p=.013	1. Coercive 2. Prosocial	11.5% R^2=.115, F(2,108)= 6.861 1. t=-1.895, p=.061 2. t=-2.016, p=.046	1. Anxiety 2. C-R 3.Prosocial	20.7% R^2=.207, F(3,108)= 9.142 1. t=-3.106, p=.002 2. t=-2.359, p=.020 3. t=-2.018, p=.046

Note. C-R (confidence dimension revised)

Prediction of institutional adjustment. ASQ anxiety and its components need for approval and preoccupied correlated negatively and significantly with goal commitment/institutional attachment total and subscales, as displayed in Table 52. Prosocial and coercive scores correlated negatively with goal commitment/institutional attachment total score, as displayed in Table 53. ASQ anxiety predicted 15.3% of the variance in goal commitment/institution attachment total (F(1,108)= 19.37, p<.001) and 6% of the variance in this college (I2) (F(1,108)= 6.874, p=.01). Anxiety and coercive predicted 12% of the variance in general (I1) ((F(2,108)= 7.402, p<.001).

Table 52

Goal Commitment/Institutional Attachment and ASQ Scale Scores

	TI	I2	I1	TRAS	TNFA	TPRE	TANX
TI	—	0.79***	0.64***	-0.16	-0.41***	-0.31***	-0.39***
I2		—	0.38***	-0.09	-0.21*	-0.24*	-0.25*
I1			—	-0.25**	-0.31**	-0.21*	-0.28**
TRAS				—	0.16	0.12	0.15
TNFA					—	0.66***	0.90***
TPRE						—	0.93***
TANX							—

* p < .05, ** p < .01, *** p < .001

Note. TI (goal commitment/institutional attachment), I1 (goal commitment/institutional attachment subcategory 1), I2 (goal commitment/institutional attachment subcategory 2), TNFA (need for approval), TPRE (preoccupation), TANX (attachment anxiety)

Table 53

Goal Commitment/Institutional Attachment and RCSI-R Scale Scores

	TI	I2	I1	Prosocial	Resource	Coercive
TI	—	0.79***	0.64***	-0.24*	0.12	-0.20*
I2		—	0.38***	-0.26**	0.01	-0.07
I1			—	-0.17	0.07	-0.29**
Prosocial				—	0.34***	0.44***
Resource					—	0.14
Coercive						—

* p < .05, ** p < .01, *** p < .001

Note: TI (goal commitment/institutional attachment), I1 (goal commitment/institutional attachment Subcategory 1), I2 (goal commitment/institutional attachment subcategory 2),

CHAPTER 5: DISCUSSION

This research investigated whether domestic undergraduate students have issues related to adult development that impact adjustment to college. Domestic undergraduate students filled out a series of previously validated self-report measures and a projective test that assessed their attachment styles, social dominance (resource control strategies), achievement motive and their adjustment to college. A multi-regression analysis was performed to assess how the social motive constructs predicted adjustment to college. The results of this study showed that adjustment to college was significantly negatively predicted by attachment anxiety and coercive resource control strategies. How these variables ultimately predict adjustment is discussed below as the research questions are answered sequentially.

Do Attachment Styles and Resource Control Strategies ovary?

The present study was unable to verify attachment styles as categorical entities, as measured by the ASQ. However, ASQ scale scores correlated in predictable ways to RCSI-R categories and scale scores. Resource control strategy category predicted attachment anxiety and relationships as secondary, replicating the findings of a previous study (Hawley et al., 2009). Coercive score also predicted attachment anxiety and relationships as secondary. Contrary to expectations and prior research, prosocial resource control was also associated with attachment anxiety, relationships as secondary and discomfort with closeness. Prosocial score also did not predict good social

adjustment. The pattern observed in the present study was that resource control (indicative of motivation to social dominance) predicted prosocial score. The prosocial score was in turn associated with the coercive score. The highest coercive scores were found in the bistrategic controllers, who had higher levels of coercive strategies than did the coercive controllers. Hence, it appears that dominance motivation leads individuals to adopt both prosocial and coercive strategies to achieve their social goals. Desire to achieve social dominance goals is in turn associated with problematic attachment behavior and attachment anxiety.

Do Attachment Styles and Achievement Motives Covary? And do Dominance Styles and Achievement Motives Covary?

Achievement motives measured explicitly and implicitly appeared more closely related to resource control. Although achievement motives were associated with ASQ scale scores, they were associated most strongly with RCSI-R scale scores. According to White (1959), children have an innate propensity for curiosity and exploration that is greatly impacted by one's attachment style (Moss & St-Laurent, 2001). However, in this sample, the participant's explicit achievement motive was impacted predominantly by resource control and coercive control strategies and his/her implicit achievement motive by coercive control strategies. Therefore, this sample showed that the need to control resources has a greater impact on achievement motives than having a secure base from which exploration is encouraged.

Does Achievement Motivation Predict Adjustment to College Independent of Attachment Styles and Resource Control Strategy?

The PSE and the PSE-Q were used to measure the participant's degree of explicit and implicit achievement motivation, as it has been associated with academic and career success (Atkinson & Litwin, 1960; McClelland, 1978). The results show that achievement motivation as measured in this study did not predict positive adjustment to college. However, motivation to achieve might be significant if geared towards academic performance (i.e. intellectual curiosity)

Do Attachment Styles Predict Adjustment to College Independent of Achievement Motivation and Resource Control Strategy?

Of the three social motives studied, attachment dimensions had the largest overall effect on adjustment to college. However, the covariance between attachment dimensions and resource control dimensions was considerable. Attachment Anxiety strongly predicted risk for mental health issues. However, mental health alone was not the only aspect of adjustment influenced by social motives. Social motives plus mental health predicted nearly half of the variance in adjustment to college.

These results confirm previous studies that have emphasized the impact of attachment styles on adjustment to college. Looking at adjustment to college in a multidimensional way highlights the importance of not just focusing on academic adjustment but also taking a students' overall adjustment into account (Baker & Siryk, 1984). This research confirms that a secure attachment style lays the basis for a successful transition to college (Mattanah et al., 2011). It appears that the expectation one has about the social world has a pervasive effect on how well a student adjusts to college (Vivona, 2000), as it affects the way they build social relationships and seek out help if needed (Mikulincer & Shaver, 2007). A secure person seems to be better able to

deal with difficulties and frustrations (Mikulincer & Shaver, 2007). Attachment security appears to function as a buffer when the attachment system is hyperactivated due to increased stress (Larose & Bernier, 2001).

Does Resource Control Strategy Predict Adjustment to College Independent of Attachment Styles and Achievement Motivation?

Resource control strategy category predicted total adjustment, social adjustment and personal/emotional adjustment. In addition, coercive strategy score had negative effects on academic, social, personal/emotional and goal commitment/institutional attachment. Prosocial score did not positively impact any aspect of adjustment to college. Resource control score positively predicted social adjustment and general social adjustment.

The study found that attachment dimensions and coercive resource control strategies are the strongest negative predictors of adjustment to college, which raises the question of how these are related to each other. Hawley et al. (2009) found that there is a correlation between an individual's resource control strategy and attachment style. Coercive controllers tend to have negative expectations of social relationships and low expectations of reaching their goals (Hawley et al., 2009). When linked to attachment styles, coercive controllers scored high on anxiety (insecure) and avoidance (insecure) and low on confidence (secure) (Hawley et al., 2009). Individuals with both attachment anxiety and coercive control have difficulty establishing social relationships with others because of their negative expectations of needs being met by others and their desire to control others.

Social relationships have been identified as critical in adjustment to college (Shim & Ryan, 2012). Social problems can affect the student's overall well-being and success in college (Shim & Ryan, 2012). Dominance goals have been associated with negative social and academic adjustment (Kiefer et al., 2013; Kiefer & Ryan, 2008), however in the present study dominance motivation was associated with positive adjustment. It is the form of enacting this motivation that appears most problematic.

Insecure attachment has been linked to negative relational expectations, characterized by uncertainty and a negative appraisal of others' attempts to offer support (Bowlby, 1988). During stressful events, hyperactivation of the attachment system causes the preoccupied individual to focus too much on stressors, which in turn increases their need for help and makes them feel that support is unavailable or insufficient (Larose & Bernier, 2001). This could cause individuals to completely stop seeking help or to seek help in an inappropriate way (Larose & Bernier, 2001). These working models are carried over into new relationships but they can be updated and revised to accommodate new relationships (Cassidy, 2002).

Recommendations for Practice

Educational leaders seek to inform current practices and services that impact student success. Therefore, the purpose of this study was to identify factors that predict adjustment to college in order to improve students' college success. Students' adjustment to college was significantly negatively correlated with attachment anxiety (preoccupation and the need for approval) and coercive control strategies. Both of these factors are influenced by established internal working models that adversely affect the way

individuals establish their social support system, which has been identified as a major factor in successful adjustment to college.

The implications of these results are threefold. First, assessment is crucial in identifying factors that affect students' adjustment to college, which is the basis for developing and implementing services that help students succeed. Second, the results of this study point towards ways existing programs can be enhanced by focusing on students' overall adjustment to college as well as academic achievement. Third, these findings can be used by faculty and staff to increase students' social support.

Assessment of Needs and Programs Implemented

A multitude of services have been offered at universities with the purpose of increasing students' success in college. However, the research is still inconclusive about how to best help students adjust to college. Posavac (2010) identified seven responsibilities of planners and managers of programs: estimate unmet needs, verify that programs do provide services, examine the outcomes, learn which programs produce the most favorable outcomes, select the programs that offer the most needed types of services, and provide information to maintain and improve quality. This study has identified social motive factors that have a significant impact on students' adjustment to college, which points toward areas where students' needs are still not met. Institutions of higher education can use that information to offer services that put equal emphasis on academic and social skills. It is therefore important to continuously reassess established programs to determine if they are still meeting the students' needs and to inform all stakeholders of how to address them in and out of the classroom (Posavac, 2010).

Enhance Existing Services and Programs

This research has focused on assessing how social motives affect adjustment to college, which emphasizes the importance of social environmental influences on students' success. The university that served as the site of this study provides a variety of services that attempt to balance the need for students' academic and social needs. It offers counseling and disability services, student support services, tutoring and learning center services, academic advising center services, as well as career development center services. In addition, the university offers new incoming students to take part in a summer orientation as well as a Summer Bridge Program. These existing services may benefit from incorporating components that strengthen students' social support systems.

Social and personal growth is an important benefit of a college education and it is intricately linked to academic adjustment, college satisfaction, and importantly to retention (Tinto, 1993). Researchers agree that academic and social skills are important for bridging the gap between high school and college but the content and implementation of these services vary greatly (Cabrera, Miner, & Milem, 2013; Strayhorn, 2011; Wathington, Pretlow, & Barnett, 2016). This research has shown that in addition to possible academic needs, students who have difficulty adjusting to college are also struggling to connect with others and to reach out to support services offered. It is therefore important to emphasize relationship building and to highlight the services available.

To bridge the gap between high school and college, pre-college programs have been implemented by many universities. Traditionally, summer bridge programs have a dual purpose to provide academic and social support (Wathington et al., 2016). It was

designed to help students with academic skills deficits that contribute to under preparedness. The program promotes services that are geared towards non-academic factors that are important for success in college. In particular, students are informed of services available at the university and are provided with activities to increase social skills and university belonging (Strayhorn, 2011). However, the summer bridge programs show mixed results.

Some research indicates that the programs improve academic performance, some say that there is no impact, and others say that there is a decrease in academic performance (Cabrera et al., 2013). It has been difficult to assess if the programs are successful because they vary in duration, services offered, and the way the impact is measured (Cabrera et al., 2013). Often the success of a program is exclusively evaluated based on student reports of program helpfulness (Cabrera et al., 2013; Strayhorn, 2011). Further, researchers have concluded that long-term benefits of bridge programs have not been sufficiently assessed (Cabrera et al., 2013; Wathington et al., 2016). The question remains: What about the program has the potential to increase students' success in college?

Research has shown that social and emotional skills training that included supervised practice had the strongest benefit (Conley, Travers, & Bryant, 2013). Creative ways to incorporate practical skills training that teaches students hands on how to incorporate them their daily interactions with peers, staff and faculty. Students may know which services are available but still do not seek them out if needed. Role playing learned skills can be an important part in modeling appropriate help seeking behaviors that could change existing working models and increase the skill set of new students.

In addition to the Summer Bridge program other initiatives can be implemented to increase students' perception of the services available. A study on social media outreach has shown that students' use of a social media sites before their first semester in college, designed to enhance students' perception on social services, increased their perception of the services available (DeAndrea, Ellison, LaRose, Steinfield, & Fiore, 2012). Students might feel comfortable reaching out to one particular service and or individual, even though they would receive more effective services elsewhere. Residential life staff and faculty might be the default go to individuals, which makes it essential for them to be aware of services offered and being able to effectively promote them. It appears that a stronger connection and cooperation is not just beneficial to the student but also prevents a duplication of services. Staff providing services on campus can reach out to faculty and other staff to find ways to incorporate vital services into students' curriculum and by bringing the services to the residence halls. Further, it is important to keep the channels of communication open in order to make sure that all stakeholders are aware of the services available and to brainstorm other ways students can be reached.

Strategies for Faculty, Staff, and Mentors

Students' help seeking behavior is largely influenced by the cognitive representation of the perceived usefulness of the help (Larose, Bernier, Soucy, & Duchesne, 1999). In many ways the student teacher-relationship, resembles the parental relationship (Larose et al., 1999) and the attachment schemas developed in childhood are likely to be activated with new relationships (Shaver, Collins, & Clark, 1996). Students that have maladaptive working models related to social relationship, may "… harbour negative representations of past experiences of support (e.g., In the past, I have been hurt

by people I confided in) and attribute bad consequences of disclosing personal information to others (e.g., If you confide in other people, they will take advantage of you)" (Larose et al., 1999, p. 243). Beck (1979) describes this in the following way,

> We are aware of the various ways that the signs and signals from our environment dictate what we do and how we feel. We stop at red lights, detour blasting areas, protest over mistreatment, exult over praise, and grouse over reproaches. We are less familiar with the internal organization of signals that correspond to external signals. Incoming messages are processed, decoded, and interpreted by our self-regulating system that issues instructions and prohibitions, self-praise and self-reproaches. (p. 24)

Students with an insecure attachment style and or who exhibit coercive resource control strategies may have a higher need for help to adjust to college but are unable to reach out to others due to their maladaptive schemas and their inability to form close emotional bonds with others. In those cases it is important to address their internal working models by revising them with positive experiences (Larose et al., 1999). Modeling appropriate help seeking behavior during class could be one way of helping students to feel more comfortable to look for support in others. Offering to meet students for office hours might not be enough to convince them that help seeking is acceptable and that assistance is available. Other opportunities to interact with students might be necessary to overcome the initial obstacle of building a supportive network. Faculty, staff and peer mentors should emphasize that help seeking behavior is encouraged. First, it is important to get to know the student population being served, which could be done

by looking at the student profile and by conducting an in-class assessment at the beginning of the semester. Once the strengths and needs of students have been identified, targeted interventions can be recommended to help students succeed. Faculty should be aware of students' characteristics and fine tune the way they are offering help to students. One student might just need reassurance that office hours are available while another needs more personal attention prior to seeking out help outside of the classroom.

Services provided on campus should be known by faculty, staff and peer mentors, so they can be promoted. It might be helpful to require students to seek out the tutoring and learning center for assignments and/or have other departments come to class to present their services. These presentations might need to be repeated. In some cases, it could be beneficial for faculty, staff and peer mentors to be part of campus life through participation in campus activities. Seeing faculty and staff outside the office might make them more approachable.

In addition, students' attachment state of mind and the professors' relational style has been found to be an important factor when it comes to self-disclosure, comfort with proximity, quality of the relationship, and their satisfaction with mentoring and their academic achievement, as displayed in Table 54 (Bernier, Larose, & Soucy, 2005).

Table 54
Professors' Relational Style and Students' Attachment State of Mind

Professors' Relational style	Students' Attachment state of mind	Interactions
Avoidance	Low, moderate, high levels of preoccupation	Self-disclosure Comfort
Ambivalence	Low, moderate, high level of dismissiveness	Comfort Relational quality Satisfaction with the mentoring Students' achievement

Note. Professors' Relational Style and Students' Attachment State of Mind. Adapted from "Academic Mentoring in College: The Interactive Role of Student's and Mentor's Interpersonal Dispositions. *Research in Higher Education"* by Bernier, A., Larose, S., & Soucy, N., 2005, *46*(1), 29–51. https://doi.org/10.1007/s11162-004-6288-5.

It seems that the helpers and helpees presenting dissimilar relational tendencies have the most productive relationship (Bernier et al., 2005). The results show that it is important to be aware of ones' relational style and to be able to adapt to the students' attachment state of mind while at the same time to gently challenge them (Bernier et al., 2005). It appears that it is not enough to just provide mentoring because not all mentoring is helpful (Bernier et al., 2005). The researchers acknowledge that it would not be realistic to assess everyone's relational style and attachment state of mind but that we should be sensitive to the implications and to assess the effectiveness of mentoring relationships early on (Bernier et al., 2005).

Summary

Academic and social skills are crucial for students' adjustment to college. This study focused on identifying social factors that predict adjustment to college and identified that attachment anxiety and coercive control strategies are the most significant predictors. Many services are in place to help students transition to college but their

effectiveness is still inconclusive, which raises the question of how they can be improved. The importance of social support highlights the fact that social and academic skills are both critical to success in college.

Suggestions for Further Research

In future research, it would be beneficial to assess different groups within the sample. The demographic covered first year generation college students, year in college, high school GPA, race and ethnicity but the sample was too small to assess if these factors affect adjustment to college and how they relate to the social motives measured.

Secondly, it would be beneficial to examine how the social motives assessed in this study impact student adjustment over time and in conjunction with programs and services that are geared towards addressing students' developmental issues related to attachment styles and resource control.

Thirdly, in this study the Picture Story Exercise and the Picture Story Exercise Questionnaire was used to assess achievement motive. These measures were more related to resource control than to academic achievement. It would be interesting to find measure that instead would measure intellectual curiosity.

Limitations

The sample size of this study was adequate but it was too small to adequately assess if different types of student populations would be differently affected by the social motives that were the focus in this research. Second, the students were recruited in different classes but had to respond to an email request and meet in the computer lab to be a participant. It is not clear if the participants that showed up were different from the students that initially signed up but never decided to participate and or the participants

that never signed up to begin with. Third, the extra credit provided for participation was left to the professors and it is difficult to tell if some professors provided more incentives for their students to participate. Fourth, an effort was made to reach a diverse undergraduate student body but only a limited number of classes were reached in the different disciplines and some disciplines were left out completely. Choosing students from a limited number of courses might have biased the research data. Last, the research data is only limited in its generalizability because of the small size of the university, sample size, admissions requirements, and by only looking at full time domestic undergraduate students.

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APPENDIX A: IRB Approval Notice

APPROVAL OF RESEARCH

October 16, 2015

Ms. Anne-Fried Drath
School of Education
University of Bridgeport

Dear Ms. Drath:

On *October 14, 2015* a designated IRB member approved the following human subject research via expedited review:

Type of Review:	*Initial*
Project Title:	Predictors of Adjustment to College
Investigator:	Anne-Fried Drath
IRB ID:	2015-10-03
Funding Agency:	*N/A*
Grant Title:	*N/A*
Grant ID:	*N/A*
IND or IDE:	*N/A*

Before October 14, 2016 or within 30 days of study close, whichever is earlier, you are to submit a completed "UB HRP-212 FORM: Continuing Review Progress Report" and required attachments to request continuing approval or study closure.

If continuing review approval is not granted before the expiration date of October 14, 2016, this research expires on that date.

In conducting this research you are required to follow the requirements listed in the *Investigator Manual*.

Sincerely,

Christine Hempowicz, Ed.D.
IRB Administrator

CC: Thomas Christ, Ph.D.

126 Park Avenue • Bridgeport, CT 06604 • Tel: 203.576.4973 • E-mail: irb@bridgeport.edu

APPENDIX B: Consent Form

Permission to Take Part in a Human Research Study Page 1 UB HRP-502

1 - Title of research study: Predictors of Adjustment to College

2 - Investigator: Anne-Fried Drath, M.S.
We invite you to take part in a research study because you are a full-time domestic undergraduate student at the University [redacted]

3 - What you should know about a research study

- Someone will explain this research study to you.
- You volunteer to be in a research study.
- Whether or not you take part is up to you.
- You can choose not to take part in the research study.
- You can agree to take part now and later change your mind.
- Whatever you decide it will not be held against you.
- Feel free to ask all the questions you want before you decide.

4 - Who can I talk to?

If you have questions, concerns, or complaints, or think the research has hurt you, talk to the research team at [redacted], adrath@my.bridgeport.edu. Further if you feel like you need to speak someone outside the research team you can contact [redacted] Counseling Services Carstensen Hall 2nd floor (phone: 203-576-4454, email: counselingservices@bridgeport.edu) This research has been reviewed and approved by an Institutional Review Board. You may talk to the IRB Administrator at (203) 576-4973 or irb@bridgeport.edu for any of the following:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You have questions about your rights as a research subject.
- You want to get information or provide input about this research.

5 - Why are you doing this research?
Students differ according to how they adjust to college life. We are looking at student characteristics that predict this adjustment.

6 - How long will the research last? We expect that you will be in this research study for one two hour time period today, followed by a 45 minute time period in 3-6 months.

Permission to Take Part in a Human Research Study Page 2 UB HRP-502

7 - How many people will be studied? We expect about _75____ people will be in this research study (phase 1 & phase 2).

8 - What happens if I say yes, I want to be in this research? You will spend two hours now or in the next week completing a series of questionnaires. Then we will contact you again in the Spring semester for a brief (30-45 min) follow up that includes three instruments/questionnaires.

- You will complete the questionnaires in a computer lab. These questionnaires cover topics such as demographics, your social relationships, your need for achievement and your goals. Your answers to these questionnaires are fully confidential, and the pages will not have your name on them. We will assign a number to you (1-75) when you complete the Fall questionnaires. The master list with your name, phone number, email address, and assigned number will be kept in a locked secure location separate from the questionnaires. In the Spring we will invite you back for a brief follow up. After you complete the three instruments/questionnaires your name will be removed from the master list and there will be nothing linking your name to the questionnaires. Only the numbers linking the paper instruments/questionnaires to the online questionnaires will remain after phase 2 is completed. The new master list without student's name will be kept in a locked file cabinet in Bates hall room 202. The Fall questionnaires may take up to 2 hours to complete and the Spring survey will take 30-45 minutes.
- You will be asked to try and answer every question in every survey and answer each question as honestly and accurately as you can.
- Upon completion of the paper instruments/questionnaires you will hand them to the P.I. and or Dr. L. J. Leedom and complete the online portion of the instruments /questionnaires. Once both parts are completed the researcher will note your name for extra credit in one of your courses and contact your professor. The specific amount of extra credit will be determined by your instructor.

9 - What happens if I say no, I do not want to be in this research? You may decide not to take part in the research and it will not be held against you. Instead of being in this research study, your choices may include: An extra credit assignment that will be an equivalent amount of points. The nature and scope of the alternative assignment is up to your course instructor.

10 - What happens if I say yes, but I change my mind later? You agree to take part in the research now. You may stop at any time and it will not be held against you. If you decide to leave the research, your paper data (paper instrument/questionnaire & consent form) will be shredded. However, if you have completed and submitted the data (paper and online instrument/questionnaire) they cannot be withdrawn. If you decide not to participate in the brief Spring follow-up the data from your Fall visit can still be used.

Permission to Take Part in a Human Research Study Page 3

11 - Is there any way being in this study could be bad for me? This study involves no more than minimal risk, the loss of confidentiality being the greatest risk. Other than that there is no reason why this study should be bad for you. However, if you would like to speak to someone about your experience as participant in this research you can speak to the P.I. and or [redacted] counseling services.

12 - Will being in this study help me any way? There are no benefits to you from your taking part in this research. We cannot promise any benefits to others from your taking part in this research. However, possible benefits to others include understanding how to help students adjust to college life.

13 - What happens to the information you collect?

Efforts will be made to limit your personal information, including research study and medical records, to people who have a need to review this information. We cannot promise complete secrecy. Organizations that may inspect and copy your information include the IRB and other representatives of this organization.
We may publish the results of this research. However, we will keep your name and other identifying information confidential.

14 - Can I be removed from the research without my OK?

The person in charge of the research study can remove you from the research study without your approval. Possible reasons for removal include failure to complete the questionnaires as instructed or behavior disruptive to other participants. The sponsor can also end the research study early.

Signature Block for Capable Adult: Long Form

Your signature below documents your permission to take part in this research and to the use and disclosure of your protected health information:
DO NOT SIGN THIS FORM AFTER THIS DATE 10/14/2016

Signature of subject	Printed name of subject	Date

Signature of person obtaining consent	Date

Printed name of person obtaining consent	Form Date

APPENDIX C: Letter to Faculty for Participant Recruitment

September 18, 2015

Dear faculty,

I am seeking your help. I am a doctoral student in Educational Leadership studying predictors of adjustment to college specifically the relationship between healthy emotional bonds, achievement motivation, and adjustment to college. These variables are assessed using self-report measures that could be adopted as screening tools for identifying at-risk students.

The target population for this study is domestic, full-time undergraduate students attending the [redacted] I would like to recruit students from your class(es). If you agree would you be willing to give extra credit to students who participate, and provide an alternative extra credit assignment to those who do not.

This study has IRB approval with the extra credit for participation. For your reference, the data collection has two phases. Phase 1 will take place in the fall 2015 semester, and phase 2 in the spring 2016 semester. Both phases of the collection will take place outside of class-time between 8:30am-8:30pm. Sessions will be offered at different days of the week to increase the times students are able to participate. The time commitment is expected to be 2 hours for phase 1 and 45 minutes for phase 2. Extra credit would apply to phase 1 only. Participants in phase 2 will be entered into a raffle in which five participants out of approximately 75 will win a $25 visa gift card.

Please let me know if you would be willing to support my dissertation research. If you have any questions, you can contact me either via email adrath@my.bridgeport.edu or cell phone [redacted]

Sincerely,

Anne-Fried Drath

APPENDIX D: Script for Participant Recruitment

- My name is Anne-Fried Drath and I am a doctoral student in the Educational Leadership program at the University of Bridgeport. I have received my B.S. in Psychology and my M.S. in Counseling: Clinical Mental Health from the [redacted] I am also, the graduate assistant in admissions. Some of you I might have met me through my work there.

- My research interest is in "Predictors of Adjustment to College."

- Students differ according to how they adjust to college life and I am looking at student characteristics that predict this adjustment.

- I am looking for domestic undergraduate full-time students that would like to participate in my research.

- The questionnaires that you will fill out cover topics such as demographics, your social relationships, your need for achievement and your goals. Your answers to these questionnaires are fully confidential, and the pages will not have your name on them.

- Students that would like to participate in my research would need to spent two hours outside of this class to answer questions in an instrument/questionnaire in phase 1 (fall 2015) and to participate in a 45 min session where some of the same instruments/questionnaires will be used to follow up in phase 2 (spring 2016).

- If you decide to participate in my research you will receive extra credit in this course from your professor and students that choose not to participate will get the opportunity to submit an alternative extra credit assignment. In phase 2 students will be entered in a raffle where 5 out of approximately 75 students will be able to win a $25 Visa gift card.

- If you feel like you might want to participate in my research you can put down your information (name, phone number, & email), so I can contact you with further details. Putting your name on the list is non-binding.

- Also, if you have any questions about the research you can contact me via email adrath@my.bridgeport.edu an or via phone at [redacted]

APPENDIX E: Demographic Questionnaire

Please answer the following questions as accurately as possible by following the directions that are listed at the end of each question.

What is your age? (please state)

What is your gender? (please circle one) Male Female Other

What is your ethnicity? (please circle all that apply)

Caucasian	Hispanic	Asian	
Black or African American	Native Hawaiian or pacific Islander	American Indian or Alaska Native	Other

What is your relationship status? (Please circle one)

Single	Married	Divorced	Committed relationship

High School Education

What year did you graduate from high school? (please state)

Which city and state was your high school located in? (please state)

What was your high school grade point average? (please state)

College/University Education

What year did you start attending the University of Bridgeport? (please state)

Did you attend any other University or college before you enrolled at the University of Bridgeport? (please circle one)

Yes No

What is your year in college? (please circle one)

Freshman 0-30 credits earned	Sophomore 31-45 credits earned	Junior 46-90 credits earned	Senior 91+ credits earned

What is your major? (please state)

Parents Educational Background

Did your mother attend college? (please circle one) Yes No I don't know

Did your father attend college? (please circle one) Yes No I don't know

APPENDIX F: Student Adaptation to College Questionnaire (SACQ)

Sample Questions of the Self-Report Measure (rated on a nine point Likert scale)

16. I am pleased now about my decision to attend this college in particular (Attachment to the Institution).

21. I'm not really smart enough for the academic work I am expected to be doing now (Academic Adjustment).

31. I've given a lot of thought lately to whether I should ask for help from the Psychological/ Counseling services Center or from a psychotherapist outside college (Personal/Emotional Adjustment).

37. I feel like I have enough social skills to get along well in the college setting (Social Adjustment)

56. I feel I am very different from other students at college in ways that I don't like (Attachment to the Institution and social adjustment).

APPENDIX G: Picture Story Exercise (PSE)

(This questionnaire will be on Survey Monkey)

Please follow the directions below

In the Picture Story Exercise, your task is to write a complete story about each picture (4 in total) – an imaginative story with a beginning, middle, and end. Try to portray who the people in each picture are, what they are feeling, thinking, and wishing for. Try to tell what led to the situation depicted in each picture and how everything will turn out in the end.

Each picture will be shown and disappear once you click next, a textbox with four guiding questions will appear:
1) What is happening? Who are the persons?
2) What has led up to this situation? What has happened in the past?
3) What is being thought? What is wanted?
4) What will happen? What will be done?
Please use them to write whatever story comes to mind. Don't worry about grammar, spelling, or punctuation- there are of no concern here.
You should use about 5 minutes for each picture; then move on to the next one.

1. Girl with a Laptop
(picture is being shown for 20 seconds)

1) What is happening? Who are the persons?
2) What has led up to this situation? What has happened in the past?
3) What is being thought? What is wanted?
4) What will happen? What will be done?

2. Student at an information board

(picture is being shown for 20 seconds)

1) What is happening? Who are the persons?
2) What has led up to this situation? What has happened in the past?
3) What is being thought? What is wanted?
4) What will happen? What will be done?

3. Student and professor

(picture is being shown for 20 seconds)

1) What is happening? Who are the persons?
2) What has led up to this situation? What has happened in the past?
3) What is being thought? What is wanted?
4) What will happen? What will be done?

4. Boxer

(picture is being shown for 20 seconds)

1) What is happening? Who are the persons?
2) What has led up to this situation? What has happened in the past?
3) What is being thought? What is wanted?
4) What will happen? What will be done?

APPENDIX H: Picture Story Exercise Questionnaire (PSE-Q)

(This questionnaire will be on Survey Monkey)

Please follow the directions below

In the next task, you will see 3 pictures.

• Please look at each picture and imagine that you would be one of the people in the situation. After looking at each picture, you will answer 10 questions about what you would think, feel, want, or try to do if you were one of the people in the situation.

• You will be asked the same 10 questions for each picture.

• Please read all the questions carefully and specify to what extent the statements would apply to you if you were one of the people in the depicted situation. The items are presented with a 1 to 5 response scale. When a statement does not apply to you at all, choose 1. If a statement fully applies to you, choose 5.

1. Student at an Information Board

Answer the questions to the first picture:

1. In this situation I would like to be better than all the others.[SEP](please circle one)

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

2. I would not care if I did not understand the current issue.[SEP]

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

3. I would not try hard to learn as much as possible from this situation.[SEP]

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

4. I would like to solve the problem at hand and do my best for that.[SEP]

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

5. I would be very glad to get the recognition for my good performance in this situation.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

6. It would be important for me to get new ideas or acquire new skills as a result of my actions.[SEP]

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

7. I would not bring out outstanding performance because it is a routine problem.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

8. It would make no difference for me if the task was carried out without result.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

9. I would expect that what I might learn from this situation will lead to something meaningful.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

10. I would work with caution and concentration to solve the existing problem.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

2. Student and professor

Answer the questions to the second picture:

11. I would like to solve the problem at hand and do my best for that.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

12. I would expect that what I might learn from this situation will lead to something meaningful.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

13. I would be very glad to get the recognition for my good performance in this situation.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

14. I would not care if I did not understand the current issue.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

15. In this situation I would like to be better than all the others.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

16. I would not bring out outstanding performance because it is a routine problem.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

17. It would be important for me to get new ideas or acquire new skills as a result of my actions.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

18. It would make no difference for me if the task was carried out without result.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

19. I would work with caution and concentration to solve the existing problem.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

20. I would not try hard to learn as much as possible from this situation.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

3. Girl with a Laptop

(picture is being shown for 20 seconds)

Answer the questions to the third picture:

21. I would be very glad to get the recognition for my good performance in this situation.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

22. It would be important for me to get new ideas or acquire new skills as a result of my actions.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

23. I would work with caution and concentration to solve the existing problem
(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

24. I would like to solve the problem at hand and do my best for that.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

25. I would not care if I did not understand the current issue.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

26. I would not try hard to learn as much as possible from this situation.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

27. It would make no difference for me if the task was carried out without result.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

28. In this situation I would like to be better than all the others.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

29. I would expect that what I might learn from this situation will lead to something meaningful.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

30. I would not bring out outstanding performance because it is a routine problem.

(Does not apply to me) **1** **2** **3** **4** **5** (Fully applies to me)

APPENDIX I: PSE Scoring Rubric

Subcategory full name	Subcategory Abbreviation	Subcategory Example	Points
Achievement Imagery	AI	She is sitting in the library to work on her paper. She is wondering if she can improve it. She is a good student and wants to get an A in the course.	(+1)
Doubtful Achievement Imagery	TI	She is sitting in the library to work on her paper. She just wants the paper to be good enough to pass the class.	(0)
Unrelated Achievement Imagery	UI	She is sitting in the library. She is bored and is browsing social media.	(-1)
Achievement Thema	(Ach Th)	She is sitting in the library to work on her paper. She is wondering if she can improve it. She is a good student and wants to get an A in the course. Versus: She is sitting in the library to work on her paper. She is wondering if she can improve it. She can't concentrate because she just fought with her friend and is wondering how she can fix it. She misses her company	(+1)
Stated need for Achievement	N	He wants to be a doctor.	(+1)
Successful Instrumental Activity	I+	He will try his best. He will become the best doctor in the U.S.	(+1)
Unsuccessful Instrumental Activity	I-	He goes to bed and gets up early and studies. Consequently, he doesn't do well on the test.	
Doubtful Instrumental Activity	I?	He is thinking hard and trying hard. He may not do very well or also he may.	

Anticipatory Goal State Positive	Ga+	They will attempt to sell their new discovery with a feeling of surety that they will become rich.	(+1)
Anticipatory Goal State Negative or doubtful	Ga-	The boy thinks he just can't make it through college. He wonders if he will succeed in solving the future problems of college curriculum	(+1)
Positive Affective State	G+	The men are both happy due to the new discovery.	(+1)
Negative Affective State	G-	He is thinking what a damn fool he has been.	(+1)
Personal & or Environmental Obstacle	Bp Bw	In the past he had poor marks. They have not the equipment needed for rubber improvements	(+1)
Possible Total Score			(+9)

APPENDIX J: PSE and PSE-Q Original Scoring Manual

Table 1.

Subcategories of Achievement-Related Coding System by McClelland et al. (1953)

Subcategory full name	Subcategory abbreviation	Subcategory example
Stated need for achievement	*N*	He wants to be a doctor. He hopes to succeed.
Successful Instrumental Activity	*I+*	He will try his best. He will become the best doctor in the U.S.
Unsuccessful Instrumental Activity	*I-*	He goes to bed and gets early and studies. Consequently he doesn't do well on the test.
Doubtful Instrumental Activity	*I?*	He is thinking hard and trying hard. He may not do very well or also he may.
Positive Anticipatory Goal State	*Ga+*	They will attempt to sell their new discovery with a feeling of surety that they will become rich.
Negative Anticipatory Goal State	*Ga-*	The boy thinks he just can't make it through college.
Doubtful Anticipatory Goal State	*Ga-*	He wonders if he will succeed in solving the future problems of college curriculum.
Positive Affective State	*G+*	The men are both happy due to the new discovery
Negative Affective State	*G-*	He is thinking what a damn fool he has been.
Personal Obstacle	*Bp*	In the past he has had poor marks.
Environmental Obstacle	*Bw*	They have not the equipment needed for rubber improvements.
Nurturant Press	*Nup*	An old experienced man is giving a young kid a little helpful advice on how to improve his work.

Items of the PSE-Q Representing Content Coding System by McClelland et al. (1953)

Subcategory Full Name	Subcategory Abbreviation	Subcategory Item
Competition with a standard of excellence	*AI 1*	In dieser Situation möchte ich besser sein als alle anderen.
Unique accomplishment	*AI 2**	Ich würde keine einzigartigen Leistungen erbringen, da es um alltägliche Probleme geht (-).
Long-term involvement	*AI 3*	Es wäre mir wichtig, durch mein Handeln, neue Ideen zu bekommen oder neue Kenntnisse zu erwerben.
Stated need for achievement	*N*	Ich möchte das vorhandene Problem lösen und würde mein Bestes dafür geben.
Successful Instrumental Activity	*I+*	Ich würde behutsam und konzentriert arbeiten, um das vorhandene Problem zu beheben.
Unsuccessful Instrumental Activity	*I-**	Ich würde mir keine besondere Mühe geben, so viel wie möglich aus dieser Situation zu lernen (-).
Positive Anticipatory Goal State	*Ga+*	Ich würde erwarten, dass das Gelernte für mich Sinn ergibt.
Negative Anticipatory Goal State	*Ga-**	Es würde mir nicht sehr viel ausmachen, wenn der Auftrag ergebnislos ausgeführt wird (-).
Positive Affective State	*G+*	Ich wäre sehr froh, wenn meine guten Leistungen in dieser Situation anerkannt werden.
Negative Affective State	*G-**	Es wäre mir gleichgültig, wenn ich den Sachverhalt nicht verstehe (-).

Note. The sub-categories AI2, GA-, I- and G- are negatively coded.*

APPENDIX K: Attachment Style Questionnaire (ASQ)

Show how much you agree with each of the following items by rating them on this scale:
1(strongly disagree) **2 3 4 5 6 7** (strongly agree)

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1. Overall, I am a worthwhile person. **1 2 3 4 5 6 7**
2. I am easier to get to know than most people. **1 2 3 4 5 6 7**
3. I feel confident that people will be there for me when I need them. **1 2 3 4 5 6 7**
4. I prefer to depend on myself rather than other people. **1 2 3 4 5 6 7**
5. I prefer to keep to myself. **1 2 3 4 5 6 7**
6. To ask for help is to admit that you're a failure. **1 2 3 4 5 6 7**
7. People's worth should be judged by what they achieve. **1 2 3 4 5 6 7**
8. Achieving things is more important than building relationships. **1 2 3 4 5 6 7**
9. Doing your best is more important than getting on with others. **1 2 3 4 5 6 7**
10. If you've got a job to do, you should do it no matter who gets hurt. **1 2 3 4 5 6 7**
11. It's important to me that others like me. **1 2 3 4 5 6 7**
12. It's important to me to avoid doing things that others won't like. **1 2 3 4 5 6 7**
13. I find it hard to make a decision unless I know what other people think. **1 2 3 4 5 6 7**
14. My relationships with others are generally superficial. **1 2 3 4 5 6 7**
15. Sometimes I think I am no good at all. **1 2 3 4 5 6 7**
16. I find it hard to trust other people. **1 2 3 4 5 6 7**
17. I find it difficult to depend on others. **1 2 3 4 5 6 7**
18. I find that others are reluctant to get as close as I would like. **1 2 3 4 5 6 7**
19. I find it relatively easy to get close to other people. **1 2 3 4 5 6 7**
20. I find it easy to trust others. **1 2 3 4 5 6 7**
21. I feel comfortable depending on other people. **1 2 3 4 5 6 7**
22. I worry that others won't care about me as much as I care about them. **1 2 3 4 5 6 7**
23. I worry about people getting too close. **1 2 3 4 5 6 7**
24. I worry that I won't measure up to other people. **1 2 3 4 5 6 7**
25. I have mixed feelings about being close to others. **1 2 3 4 5 6 7**
26. While I want to get close to others, I feel uneasy about it. **1 2 3 4 5 6 7**
27. I wonder why people would want to be involved with me. **1 2 3 4 5 6 7**
28. It's very important to me to have a close relationship. **1 2 3 4 5 6 7**
29. I worry a lot about my relationships. **1 2 3 4 5 6 7**
30. I wonder how I would cope without someone to love me. **1 2 3 4 5 6 7**
31. I feel confident about relating to others. **1 2 3 4 5 6 7**
32. I often feel left out or alone. **1 2 3 4 5 6 7**
33. I often worry that I do not really fit in with other people. **1 2 3 4 5 6 7**

34. Other people have their own problems so I don't bother them with mine. **1 2 3 4 5 6 7**
35. When I talk over my problems with others, I generally feel ashamed or foolish. **1 2 3 4 5 6 7**
36. I am too busy with other activities to put much time into relationships. **1 2 3 4 5 6 7**
37. If something is bothering me, others are generally aware and concerned. **1 2 3 4 5 6 7**
38. I am confident that other people will like and respect me. **1 2 3 4 5 6 7**
39. I get frustrated when others are not available when I need them. **1 2 3 4 5 6 7**
40. Other people often disappoint me. **1 2 3 4 5 6 7**

APPENDIX L: ASQ Scoring Rubric

Show how much you agree with each of the following items by rating them on this scale:

1 = totally disagree - 7 = totally agree

Confidence	1. Overall, I am a worthwhile person.
Confidence	2. I am easier to get to know than most people.
Confidence	3. I feel confident that people will be there for me when I need them.
Discomfort	4. I prefer to depend on myself rather than other people.
Discomfort	5. I prefer to keep to myself.
R as S	6. To ask for help is to admit that you're a failure.
R as S	7. People's worth should be judged by what they achieve.
R as S	8. Achieving things is more important than building relationships.
R as S	9. Doing your best is more important than getting on with others.
R as S	10. If you've got a job to do, you should do it no matter who gets hurt.
N for A	11. It's important to me that others like me.
N for A	12. It's important to me to avoid doing things that others won't like.
N for A	13. I find it hard to make a decision unless I know what other people think.
R as S	14. My relationships with others are generally superficial.
N for A	15. Sometimes I think I am no good at all.
Discomfort	16. I find it hard to trust other people.
Discomfort	17. I find it difficult to depend on others.
Preoccupation	18. I find that others are reluctant to get as close as I would like.
Confidence	19. I find it relatively easy to get close to other people.

Discomfort (R)	20. I find it easy to trust others.
Discomfort (R)	21. I feel comfortable depending on other people.
Preoccupation	22. I worry that others won’t care about me as much as I care about them.
Discomfort	23. I worry about people getting too close.
N for A	24. I worry that I won't measure up to other people.
Discomfort	25. I have mixed feelings about being close to others.
Discomfort	26. While I want to get close to others, I feel uneasy about it.
N for A	27. I wonder why people would want to be involved with me.
Preoccupation	28. It's very important to me to have a close relationship.
Preoccupation	29. I worry a lot about my relationships.
Preoccupation	30. I wonder how I would cope without someone to love me.
Confidence	31. I feel confident about relating to others.
Preoccupation	32. I often feel left out or alone.
Confidence (R)	33. I often worry that I do not really fit in with other people.
Discomfort	34. Other people have their own problems so I don’t bother them with mine.
N for A	35. When I talk over my problems with others, I generally feel ashamed or foolish.
R as S	36. I am too busy with other activities to put much time into relationships.
Confidence	37. If something is bothering me, others are generally aware and concerned.
Confidence	38. I am confident that other people will like and respect me.
Preoccupation	39. I get frustrated when others are not available when I need them.
Preoccupation	40. Other people often disappoint me.

Note: R as S = Relationships as Secondary

N for A = Need for Approval

Items marked (R) need to be reverse-scored.

APPENDIX M: Resource-Control Strategy Inventory Revised (RCSI-R)

(This inventory will be on Survey Monkey)

Show how much you agree with each of the following items by rating them on this scale:
(strongly disagree) **1 2 3 4 5 6 7** (strongly agree)

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1. I access resources (material, social, informational) by dominating others. **1 2 3 4 5 6 7**
2. I access resources (material, social, informational) by bullying others. **1 2 3 4 5 6 7**
3. I access resources (material, social, informational) by tricking or manipulating others **1 2 3 4 5 6 7**
4. I access resources (material, social, informational) by forcing them from others. **1 2 3 4 5 6 7**
5. I access resources (material, social, informational) by acting like I'm angry. **1 2 3 4 5 6 7**
6. I access resources (material, social, informational) by convincing others I'm their friend when I'm not. **1 2 3 4 5 6 7**
7. I access resources (material, social, informational) by 'helping' others (even if they don't really need it). **1 2 3 4 5 6 7**
8. I offer myself for friendship to access resources (material, social, informational). **1 2 3 4 5 6 7**
9. I access resources (material, social, informational) by extending invitations (e.g., social event, vacation home). **1 2 3 4 5 6 7**
10. I access resources (material, social, informational) by promising something in return (reciprocating). **1 2 3 4 5 6 7**
11. I access resources (material, social, informational) by way of flattery or ingratiation. **1 2 3 4 5 6 7**
12. I access resources (material, social, informational) by doing something nice for someone in advance with the hope they will reciprocate. **1 2 3 4 5 6 7**
13. If there's something worth knowing, I'm among the first to know it. **1 2 3 4 5 6 7**
14. I get the inside scoop. **1 2 3 4 5 6 7**
15. I get important information that I and others need or want. **1 2 3 4 5 6 7**
16. I am the center of attention when with friends. **1 2 3 4 5 6 7**
17. I get the attention of high status/important people when with others. **1 2 3 4 5 6 7**
18. I'm successful at getting a date (or sex) with whom I want. **1 2 3 4 5 6 7**
19. I'm successful at getting the material things that I and

others want. **1 2 3 4 5 6 7**

20. I know how to get a job/internship/position that I and others want. **1 2 3 4 5 6 7**
21. I'm successful at getting the things that I and others value. **1 2 3 4 5 6 7**
22. I'm successful at getting things that are associated with status. **1 2 3 4 5 6 7**

APPENDIX N: RCSI-R Scoring Rubric

Coercive Resource Control	CC1	I access resources (material, social, informational) by dominating others.
Coercive Resource Control	CC2	I access resources (material, social, informational) by bullying others.
Coercive Resource Control	CC3	I access resources (material, social, informational) by tricking or manipulating others.
Coercive Resource Control	CC4	I access resources (material, social, informational) by forcing them from others.
Coercive Resource Control	CC5	I access resources (material, social, informational) by acting like I'm angry.
Coercive Resource Control	CC6	I access resources (material, social, informational) by convincing others I'm their friend when I'm not.
Prosocial Resource Control	PC1	I access resources (material, social, informational) by 'helping' others (even if they don't really need it).
Prosocial Resource Control	PC2	I offer myself for friendship to access resources (material, social, informational).
Prosocial Resource Control	PC3	I access resources (material, social, informational) by extending invitations (e.g., social event, vacation home).
Prosocial Resource Control	PC4	I access resources (material, social, informational) by promising something in return (reciprocating).
Prosocial Resource Control	PC5	I access resources (material, social, informational) by way of flattery or ingratiation.
Prosocial Resource Control	PC6	I access resources (material, social, informational) by doing something nice for someone in advance with the hope they will reciprocate.
Resource Control	RC1	If there's something worth knowing, I'm among the first to know it.
Resource Control	RC2	I get the inside scoop.

Resource Control	RC3	I get important information that I and others need or want.
Resource Control	RC4	I am the center of attention when with friends.
Resource Control	RC5	I get the attention of high status/important people when with others.
Resource Control	RC6	I'm successful at getting a date (or sex) with whom I want.
Resource Control	RC7	I'm successful at getting the material things that I and others want.
Resource Control	RC8	I know how to get a job/internship/position that I and others want.
Resource Control	RC9	I'm successful at getting the things that I and others value.
Resource Control	RC10	I'm successful at getting things that are associated with status.